THE SERI INDIANS

By W J McGee

INTRODUCTION

Salient Features

Something has been known of the Seri Indians (Seris, Ceris, Ceres, 114
Heris, Tiburones) since the time of Coronado, yet they remain one of the
least-studied tribes of North America. The first systematic investigation
of the tribe was made in the course of expeditions by the Bureau
of American Ethnology in 1894 and 1895; it was far from complete.

The Seri Indians are a distinctive tribe in habits, customs, and language, 101
inhabiting Tiburon island in Gulf of California and a limited [131]
adjacent area on the mainland of Sonora (Mexico). They call
themselves *Kun-kaak* or *Kmike*: their common appellation is from
the Opata, and may be translated "spry". Their habitat is arid and 133
rugged, consisting chiefly of desert sands and naked mountain rocks,
with permanent fresh water in only two or three places; it is barred from
settled Sonora by a nearly impassable desert. Two centuries ago the
population of the tribe was estimated at several thousands, but it 161
has been gradually reduced by almost constant warfare to barely three
hundred and fifty, of whom not more than seventy-five are adult males,
or warriors.

The Seri men and women are of splendid physique; they have fine 142
chests, with slender but sinewy limbs, though the hands and especially
the feet are large; their heads, while small in relation to stature,
approach the average in size; the hair is luxuriant and coarse, ranging
from typical black to tawny in color, and is worn long. They are notably [147]
vigorous in movement, erect in carriage, and remarkable for fleetness
and endurance.

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and 105
other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood.

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

105 sepulture. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

Seriland is surrounded with prehistoric works, telling of a numerous 172 population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

RECENT EXPLORATIONS AND SURVEYS

114 Present knowledge of Seriland and its inhabitants is based primarily on the work of two expeditions by the Bureau of American Ethnology, 121 conducted in 1894 and 1895, respectively; and, secondarily, on researches [122] into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papagueria, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early [122] in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation. Accordingly the party was reorganized at Hermosillo, and, with the 114 sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,

where a temporary Seri rancheria was found occupied by about sixty 114
of the tribe, including subchief Mashém, who speaks Spanish. In this
part of the work the expedition was accompanied by Señor Pascual [115]
Encinas, the owner of the rancho visited, and doubtless the best
informed white man concerning the habits, customs, personnel, and
habitat of the tribe. About a week was spent in intercourse with the
occupants of the rancheria, when the studies were brought to an end
through the illness of Señor Encinas, and the consequent necessity for
return to Hermosillo. The expedition then proceeded northwestward
and northward along a route so laid as to define the western limits of
Papagueria proper, and reached Tucson near the end of the year. In
addition to the leader, the party comprised Mr William Dinwiddie,
photographer; José Lewis, Papago interpreter, and E. P. Cunningham, [115]
teamster. The outfit was furnished chiefly by Mr J. M. Berger, of San
Xavier (near Tucson). On the visit to the Seri frontier the party was [122]
accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted
as Spanish interpreter), and two or three attachés of Molino del Encinas.[1]

The second expedition was directed primarily toward investigation
of the Seri, and only incidentally to continuation of the researches [121]
among the Papago. Outfitting at Tucson in October (again with the
aid of Mr Berger), the expedition proceeded southward by a route [122]
different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international
boundary at Sasabe to Rio Sonora. Descending the previously
unmapped course of Rio Bacuache, the expedition reached the Rancho de
San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath,
immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri
habitat, terminating at the crest of Johnson peak, the highest point in
Sierra Seri. The triangulation and topographic surveys were carried [126]
over the territory traversed, and several points were fixed on Isla
Tiburon; but the natives, agitated by a skirmish with vaqueros on
the frontier a day or two earlier, had withdrawn to remoter parts of the
territory, and were not encountered. The party returned to Costa Rica,
a rude boat was completed, transported across the desert via Pozo [122]
Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak.
The surveys were extended to the southern portion of Sierra Seri and
Isla Tassne, and, after various difficulties and delays due to dearth of
fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

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[1] The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half-tone, forming plate II: Señor Encinas seated at the end of the table; his son, Don Manuel (bareheaded), and Don Ygnacio Lozania at his right; a grandson behind him, and Señor Alvemar-Leon seated at his left, with Mashém kneeling over the table in the foreground.

114 both sides of Bahia Kunkaak and El Infiernillo. Some of these had been occupied almost to the hour of the visit, but the occupants had taken flight, leaving most of their unattached possessions behind, [123] and were not seen, though it was evident that, like wary birds and game animals, they kept the invaders in sight from points of vantage and hidden lairs. The eastern scarps and foot-slopes of Sierra Kunkaak were traversed extensively and repeatedly; its crest was crossed by [126] Mr Johnson with a small party at a point west of Punta Narragansett, and the triangulation and topographic sketching were connected with the work on the mainland and carried over practically the entire surface of the island, being tied to the work of the Hydrographic Office about the coasts. Then, despairing of finding the wary natives, and having exhausted food supplies, the party returned to the mainland and thence to Costa Rica, arriving in the evening of December 31.

The original party comprised, in addition to the leader, Mr Willard D. Johnson, topographer; Mr J. W. Mitchell, photographer; Hugh Norris, Papago interpreter, and José Contrares, teamster. The party engaged in the expedition to Sierra Seri comprised the leader, Messrs Johnson and Mitchell, Mr L. K. Thompson of Hermosillo, Don Andrés Noriega of Costa Rica, José Contrares, and two Papago Indian guards, Miguel and Anton, of Costa Rica. The Tiburon party was made up of the leader, Messrs Johnson and Mitchell, S. C. Millard of Los Angeles, and Señores Andrés Noriega and Ygnacio Lozania, together with Ruperto Alvarez, a Yaqui Indian guard, and Miguel, Anton, Mariana, Anton Ortiz, and Anton Castillo, Papago guards; while Hugh Norris and José Contrares, with half a dozen Papago guards and other attachés of the rancho at Costa Rica, maintained an intermittent supply station at Embarcadero Andrade. Señor Encinas cooperated in the work of the expedition, part of the time at Costa Rica and part at Molino del Encinas, his principal hacienda in the outskirts of Hermosillo; while Mr Thompson and Dr W. J. Lyons aided in the work, the former at both Hermosillo and Costa Rica and the latter at Hermosillo.

The return trip from Costa Rica lay via Hermosillo, and permitted the extension of the plane-table surveys to this longitude. While at the city advantage was taken of the opportunity to obtain linguistic [115] and other data from "El General" Kolusio, a full-blood Seri retained at the capital by the State for occasional duty as a Seri interpreter, who was obligingly assigned to the service of the party by Señor Don Ramón Corral, then governor of Sonora. At Hermosillo the leader of the expedition left the main party, which then proceeded northwestward and northward along the route followed by the 1894 expedition on the return journey, the party comprising Mr Johnson, in charge, with Messrs Mitchell and Millard, Hugh Norris, and José Contrares; and the plane-table surveys were continued and combined with the route surveys made on the outward journey.

The principal ethnologic results of both expeditions relating to the Seri Indians are incorporated in the following pages; the data concerning the Papago are reserved for further study. The topographic surveys of the 1895 expedition covered a zone averaging 50 miles in width, extending from the international boundary to somewhat beyond Rio Sonora. Mr Johnson, by whom these surveys were executed, was on furlough from the United States Geological Survey, and his resumption of survey work prevented the construction of finished maps, except that of Seriland (plate I), which forms but a small fraction of the area surveyed. The results of the remaining, and by far the greater, part of the topographic surveys are withheld pending completion of the inquiries concerning the Papago Indians. 114 128

The geographic nomenclature found requisite in the field and in writing is partly new and partly restored, yet conforms with general and local custom so far as practicable; and nearly all of the new names have been applied in commemoration of explorers or pioneers. Most of the names pertaining to Seriland proper are incorporated in the map forming plate I; the others (including a few minor corrections) appear in the outline map forming figure 1, prepared after the larger sheet was printed.[1] 103 114 175

The following list of place-names is designed primarily to give the meaning and raison d'être of the nomenclature; with a single exception,[2] the names are Hispanized or Mexicanized in accordance with local usage.

Nomenclature of Seriland.[3]

***Seriland**: Extra-vernacular name of tribe, with English locative.

Mar de Cortés (Sea of Cortés=Gulf of California): Customary Sonoran designation, applied by Ulloa (1539) in honor of Hernando Cortés, first discoverer of the gulf.

***Pasaje Ulloa** (Ulloa passage): Generic Spanish; specific applied in honor of Captain Francisco de Ulloa, first navigator of the passage and the upper gulf, 1539.

***Estrecho Alarcon** (Alarcon strait): Named in honor of Hernando de Alarcon, second navigator of the gulf, 1540.

El Infiernillo (The Little Hell): Local designation, retained by the Hydrographic Office, U. S. N. (miswritten "Estrecho Infernillo" on larger map).

†**Boca Infierno** (Mouth of Hell): A colloquial local designation (miswritten "Puerto Infierno" on larger map).

***Bahia Kunkaak** (Kunkaak bay): Generic Spanish; specific the vernacular name of the Seri tribe (miswritten "Tiburon bay" on plates IV and V).

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[1] The larger map was drawn early in 1896, and a preliminary edition in the form of a photolithograph of the drawing was published in the National Geographic Magazine, vol. VII, 1896. It is proper—and historically desirable—to explain that while a considerable part of the copy for this paper was prepared at about the same time, circumstances prevented the completion of the manuscript and the final rectification of the nomenclature and bibliographic references until September 1, 1900.

[2] Johnson peak. It is proper to say that this name was applied by the author (and leader of the expedition) after the drawing was completed and submitted by Mr Johnson, as a meager tribute to his excellent work in the field and on the drawings named.

[3] An asterisk indicates new names, an obelisk old names restored or colloquial names adopted. [128]

103
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Bahia Kino (Kino bay): Long-standing name given in honor of Padre Eusebio Francisco Kino, an early Jesuit missionary (the "Bahia San Juan Bautista" of various early maps); adopted in Anglicized form by the Hydrographic Office, U. S. N.

† Bahia Tepopa (Tepopa bay): Specific a corruption of Tepoka, the extra-vernacular name of a local tribe related to the Seri; applied in 1746 by Padre Consag, and used by most navigators and cartographers of later dates, though it does not appear on the charts of the Hydrographic Office, U. S. N.

Bahia Agua Dulce (Freshwater bay): Named by Lieutenant R. W. H. Hardy, R. N., 1826; name retained (in Anglicized form) by Hydrographic Office, U. S. N. (The name is misplaced on Hardy's map, but the bay is correctly located in his text, p. 293.)

† Bahia Bruja (Witch bay): Named (in honor of his vessel) by its discoverer, Lieutenant Hardy, 1826.

* Bahia Espence (Spence bay): Named in honor of Pilot Tomás Espence (Thomas Spence), second circumnavigator of the island, who landed in the bay in 1844.

† Estero Cochla (Cockle inlet): Named by Lieutenant Hardy, 1826.

* Bajios de Ugarte (Ugarte shoals): Named in honor of Padre Juan de Ugarte, first visitor to the shoals and circumnavigator of Tiburon, 1721.

* Rada Ballena (Whale roadstead): Named from the stranding of a whale about 1887, an incident of much note among the Seri.

* Anclaje Dewey (Dewey anchorage): Named in honor of its discoverer, Commander (now Admiral) George Dewey, in charge of the surveys by the Hydrographic Office, U. S. N., 1873.

Laguna la Cruz (Lagoon of the Cross): Name adopted (Anglicized) by Hydrographic Office, U. S. N.; the "Laguna de los Cerraditos" (Lagoon of the Little Banks) of Colonel Francisco Andrade, 1844.

Isla Tiburon (Shark island): Name of long standing; used alternatively with "Isla San Agustin" since the seventeenth century, both names being apparently applied to Isla Tassne by several writers, and also to Isla Angel de la Guarda (the second largest island in the gulf) by Kino and others; while the present Tiburon was regarded as a peninsula.

Isla San Esteban (Saint Stephen island): Name of long standing; in consistent use since early in the seventeenth century.

* Isla Tassne (Pelican island): Name recast by the use of the Seri specific in lieu of the Spanish (Alcatráz), which is too hackneyed for distinctive use.

Isla Turner (Turner island): Name used (and probably applied in honor of Rear-Admiral Thomas Turner, U. S. N.) by the Hydrographic Office, U. S. N.

Isla Patos (Duck island—i. e., Island of Ducks): Name of long standing; adopted by the Hydrographic Office, U. S. N.

Roca Foca (Seal rock): Name used (and probably applied) by the Hydrographic Office, U. S. N.

Peña Blanca (White crag): Name used (and probably applied) by the Hydrographic Office, U. S. N.

Punta Tepopa (Tepopa point): Named (probably corruptly) from a local tribe related to the Seri; used by the Hydrographic Office, U. S. N.

Punta Sargent (Sargent point): Name applied by Lieutenant Hardy in 1826 to what is now known as Punta Tepopa; adopted for the minor point by the Hydrographic Office, U. S. N.

* Punta Perla (Pearl point): Name applied in commemoration of the traditional pearl fisheries of the vicinity.

* Punta Arena (Sand point): A descriptive designation.

* Punta Tortuga (Turtle point): Name applied in recognition of the extensive turtle fisheries of the Seri in the vicinity.

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*Punta Tormenta (Hurricane point): Name applied in recognition of the nearly continuous gales and tide-rips by which navigation is rendered hazardous, and by which the long sand-spit has been built.

Punta Miguel (Miguel point): Recast from "San Miguel point", partly through association with the name of a Papago guard accompanying the expedition of 1895; in the old form the name is of long standing, was probably applied by Escalante in 1700, and was adopted by the Hydrographic Office, U. S. N., 1873.

*Punta Granita (Granite point): A descriptive designation.

*Punta Blanca (White point): A descriptive designation.

*Punta Narragansett (Narragansett point): Specific (of Algonquian Indian derivation) applied in commemoration of the vessel employed in the surveys by the Hydrographic Office, U. S. N., in 1873, the point being that at which the commander of the *Narragansett* located the principal Seri rancheria of that time and made observations on the tribe.

*Punta Ygnacio (Ygnacio point): Specific applied in honor of Don Ygnacio Lozania, a trusted aid in the 1895 expedition, who had visited this point in connection with the Andrade expedition of 1844; described as "Dark bluff" on charts of the Hydrographic Office, U. S. N.

*Punta Antigualla (Antiquity point—i. e., Point of Antiquities): Name applied in recognition of a great shell-mound which has retarded the transgression of the sea and produced the point.

Punta Kino (Kino point): Name of long standing; specific in honor of the early missionary; used by the Hydrographic Office, U. S. N.

*Punta Mashém (Mashém point): Specific in honor of the Seri chief Mashém (sometimes called Francisco Estorga or Juan Estorga), who speaks Spanish and acted as Seri-Spanish interpreter in 1894.

Punta Monumenta (Monument point): Named by the Hydrographic Office, U. S. N.

Punta Colorada (Red point): Recast from the "Red Bluff point" of the Hydrographic Office, U. S. N.

Punta Willard (Willard point): Origin of name unknown; used by the Hydrographic Office, U. S. N.

*Embarcadero Andrade (Andrade landing): Named in memory of the embarcation for Tiburon of Colonel Francisco Andrade, 1844.

*Campo Navidad (Christmas camp): Named in memory of a camp occupied December 24-28 by the expedition of 1895.

*Sierra Seri (Seri range): Generic Spanish, specific the extra-vernacular tribe name.

*Sierra Kunkaak (Kunkaak range): Specific the vernacular tribe name.

*Sierra Menor (Minor range): A descriptive designation.

*Cerros Anacoretos (Anchorite hills): A designation suggested to Topographer Johnson by the solitary series of spurs rising singly or in scattered groups from the sheetflood-carved desert plain.

*Johnson peak: Name applied in commemoration of the first and only ascent of the peak, and of its occupation as a survey station, December 7 and 8, 1895, by Willard D. Johnson, accompanied by John Walter Mitchell and Miguel (Papago Indian).

*Desierto Encinas (Encinas desert): Generic Spanish, specific in honor of the intrepid settler on the outskirts of the desert, Señor Pascual Encinas.

*Playa Noriega (Noriega playa): Generic Spanish, specific in honor of Don Andrés Noriega, kinsman of Señora Anita Encinas, a resident on the outskirts of the desert, and the leading Mexican aid in the expedition of 1895.

*Arenales de Gil (Gil sandbanks): Generic Spanish, specific in honor of Fray Juan Crisóstomo Gil de Bernabe, sole missionary to Seriland, massacred at this point in 1773.

*Rio Sonora (Sonora river): Generic Spanish, specific a long standing and originally colloquial corruption of Señora, a designation said to have been applied by Spanish pioneers to a hospitable native chieftainess; afterwards apparently fixed through the name of an early mining camp and garrison and perhaps by similarity to a local aboriginal (Opata) term connoting maize, i. e., *sonot*. 103

Rio Bacuache (Bacuache river): Name of long standing; specific doubtless from the Opata term *bacot*, "snake", with a locative termination, i. e., "Snake place". 114 125

†**Arroyo Carrizal** (Reedy arroyo): Generic and specific Spanish; colloquial designation used by the Seri chief Mashém in describing the island; a traditional name of long standing.

†**Arroyo Agua Dulce** (Freshwater arroyo): A traditional name like the former, also used by Mashém.

***Arroyo Millard** (Millard arroyo): Named in memory of S. C. Millard, aid and interpreter in the expedition of 1895 (died 1897).

***Arroyo Mariana** (Mariana arroyo): Named in honor of Mariana (Papago Indian), a guard accompanying the 1895 expedition, who had once approached this arroyo on a hunting expedition.

***Arroyo Mitchell** (Mitchell arroyo): Named in honor of John Walter Mitchell, photographer of the 1895 expedition.

†**Pozo Escalante** (Escalante well): Generic Spanish, specific in honor of Sergeant Juan Bautista de Escalante, the first Caucasian to cross El Infiernillo (in 1700), who is reputed to have dug the shallow well still existing; the name has been retained ever since alternatively with "Agua Amarilla" (Yellow water); doubtless the "Carrizal" of certain early maps; the site of the only mission ever established in Seriland, and of the massacre of Fray Crisóstomo Gil in 1773.

***Pozo Hardy** (Hardy well): Named in honor of Lieutenant R. W. H. Hardy, R. N., second known Caucasian visitor to the spot, 1826.

***Aguaje Anton** (Anton water, or water-hole): Generic a common Mexican term; specific applied in memory of Anton (Papago Indian), a guard and visitor to the spot in the expedition of 1895.

***Aguaje Parilla** (Parilla water): A traditional water (not found by the expedition of 1895) named in memory of Colonel Diego Ortiz Parilla, the vaunted destroyer of the Seri in 1749, whose imposing expedition may have reached this point.

***Barranca Salina** (Saline gorge): Generic colloquial Mexican, specific denoting the character of the practically permanent water; the designation applied by Mexican vaqueros and Papago hunters, who occasionally visit the locality.

***Tinaja Anita** (Anita basin): Generic a useful Mexican term for a water-pocket, or rock basin containing water supplied by storms or seepage; specific a tribute to Anita Newcomb McGee, M. D., Actg. Asst. Surg. U. S. A.; perhaps the "Aguaje de Andrade" of 1844.

***Tinaja Trinchera** (Entrenched basin): Specific a common Mexican term for the ancient entrenchments found on many mountains of Papagueria; applied in recognition of a few low, loose-laid stone walls about the tinaja, the only structures of the kind known in Seriland.

Rancho San Francisco de Costa Rica: Name applied by the founder, Señor Pascual Encinas, about 1850.

Rancho Santa Ana: Name applied by the founder, Señor Encinas, about 1870.

Rancho Libertad: Name applied by the founder, Señor Encinas, about 1875.

The fairly full geographic nomenclature of Seriland merely expresses the necessity for place-names, felt in some measure by all intelligent beings, and realized especially by explorers and describers of the region. Excepting the ranchos and perhaps Pozo Escalante, they denote natural features only, and, with the same exceptions, the features are seen but rarely or from great distances by enlightened men. Despite 000

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137 the wealth of place-names and the strongly accentuated configuration which the nomenclature expresses, Seriland is one of the most hopeless deserts of the American hemisphere.

ACKNOWLEDGMENTS

Since most of the field work of the two expeditions lay in the neighboring Republic of Mexico, it became necessary to ask official sanction (122) for the operations from the Mexican government; and it is a pleasure to say that every possible privilege and courtesy were extended by both federal and state officials. Especial acknowledgments are due to (000) the Mexican minister (and afterward ambassador) to the United States, his Excellency Don Mateo Romero (now deceased); to the Ministro de Fomento of the Mexican Republic, Excelencia Don Fernando Leal; and to the governor of the State of Sonora, Señor Don Ramón Corral. Equal acknowledgments are due to various United States officials, notably Honorable W. Woodville Rockhill, First Assistant Secretary of State when the expeditions were planned; and it is a pleasure to advert to the active interest taken in both expeditions by Honorable S. P. Langley, Secretary of the Smithsonian Institution, and to the careful attention given the 1894 expedition by the late Dr G. Brown Goode, Assistant Secretary of the Institution.

Mr Willard D. Johnson did invaluable service in connection with (114) the second expedition, particularly in the execution of surveys and the (126) construction of maps in inimitable style. Mr William Dinwiddie is to be credited with the excellent photographs made during the 1894 expedition, with the representation of the devices used in Seri face-painting, and with various other aids to the investigation; while Mr J. W. Mitchell is to be credited with the photographs made on Isla Tiburon, and with other contributions to the success of the 1895 expedition. (000) Acknowledgments are due also to all of the participants in both expeditions, whose names appear in other paragraphs. Their contributions were not primarily intellectual, yet were of a kind and amount to be forever remembered among men who have worked and hungered and thirsted and stood guard together. The deepest debt connected with the field work is to the now venerable but ever vigorous pioneer, Señor Pascual Encinas; and no small part of this debt goes over to his estimable spouse, Señora Anita Encinas, who twice traversed the long road from Hermosillo to Costa Rica in the interest of the 1895 expedition.

The scientific results of the researches have been enriched by invaluable contributions from Director Powell's store of ethnologic knowledge, and by suggestions from Messrs Frank Hamilton Cushing, F. W. Hodge, James Mooney, and other collaborators in the Bureau of American Ethnology. The qualities of the colored illustrations are (114) due largely to the artistic skill of Mr Wells M. Sawyer, by whom they were designed, and of Mr DeLancey Gill, by whom the proofs were revised. The Spanish translations are due chiefly to Colonel F. F.

Hilder, ethnologic translator of the Bureau, partly to Mr Emanuele 114 Fronani; though neither can be charged with errors of interpretation or of Englishing, both finally shaped by the author. The somatic determinations and discussions were by Dr Ales Hrdlička, of New York; the tests for arrow poison were made by Dr S. Weir Mitchell, of Philadelphia; while the philologic comparisons were made almost wholly (with notable thoroughness and perspicacity, and in such wise as to illustrate the wealth and utility of the linguistic collections of the Bureau) by Mr J. N. B. Hewitt. Finally, it has become due, probably for the 000 first time in the nearly four centuries of their history, to make public acknowledgment of services by Seri Indians, viz, subchief Mashém, the real sponsor for the Bureau vocabulary and many other data, and "El General" Kolusio, the outlaw interpreter of Hermosillo and contributor to certain historical identifications.

also a center for radiating trails, the best-beaten of these leading toward 487 the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherias half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, [361] there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Poso Hardy and Arroyo Agua Dulce, and two or three smaller rancherias along the western shore; but these were not reached by the 1895 expedition.

4. The seas washing Seriland are notably troubled by tides and 133 winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marias and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and Broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquito. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,[1] with their marine buttresses, and through the breaches of Pasaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands.

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahia Kunkaak is a funnel-shape embayment so placed as to catch half the volume of the incoming tide and to

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[1] Originally the name Islas Sal-si-puedes (Get-out-if-canst) was applied to the various islands of this gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre *Fernando* Consag (in Noticia de la California y de su Conquista, etc., por el Padre Miguel Venegas, 1757, tomo III, p. 194); and Padre Consag's account of the currents encountered in 1746 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal-si-puedes, so greatly dreaded by seamen on account of those islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' Noticia, titled A Natural and Civil History of California, 1759, vol. II, pp. 312-313). Hittell speaks of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (History of California, 1885, vol. I, p. 223). Dewey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted postea, p. 65.

103
114

133 concentrate the flow into a bore hurtling through Boca Infierno and thence throughout the shoaling strait with greatly accelerated velocity; meantime the body of the tidal stream is diverted around Tiburon, and then enfeebled in its northward flow by the expansion of the gulf above the Tiburon-San Francisquito gateway, so that the entire strait is flooded (to the limit fixed by the capacity of Boca Infierno) before the main tide flows into its head past Isla Patos and through Bahia Tepopa; and with this unobstructed inflow the strait is reflooded with a counterbore, whereby the waters are heaped and pounded into an unstable, swirling, churning mass.[1] The flooding is little less than catastrophic in magnitude and suddenness; indeed, the volume of water in the body of the strait between Punta Perla and Boca Infierno

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[114] [1] Unquestionably the clearest view of El Infiernillo ever enjoyed by Caucasian eyes was that of Messrs Johnson and Mitchell from the culminating point of Sierra Seri (Johnson peak), which they occupied for about twenty-three hours on December 7 and 8, 1895. Mr Johnson's notes on the appearance of the strait are as follows: "On the occasion of the ascent of Sierra Seri, which rises from the coast, shutting off the view of Isla Tiburon from the desert on the east, I received a striking impression of the elaborate and beautifully symmetrical plan of the long swirling currents of El Infiernillo. The climb had been made from the east direct to the summit peak, so that the first sight of both island and gulf was not only from close at hand, but from an elevation of about a mile. The crest of the ridge was reached at the instant of sunset, and the spectacle of the innumerable current-markings was brief. Our position was nearly opposite the northern end of the strait; and its elevation was so great that the opposite mainland and island shorelines were seen in map effect rather than in perspective. The entire strait, to its northern end at Punta Perla, was in the shadow of the island; and the current design was revealed only in the shadow. At the shadow-margin extending from the northern tip of the island the lines were sharply cut off; and beyond, along the westward bend of waters forming Bahia Tepopa and opening into the gulf in full sunlight, there was no suggestion of them. Within the shadow the effect was that of a film of oil on a water-surface which had been stirred and allowed to come to rest—though the regularity of the lines was as though the stirring had been orderly. Not the slightest motion was perceptible from the peak during the minute or two that the spectacle lasted before the sun disappeared and twilight fell, though the suggestion from configuration alone was that of violent swirling. The general movement was evidently southward toward Boca Infierno, and the swirls were apparently the result of frictional resistance along both shores; the system of curving lines as a whole was very much that which would be presented by a broad feather thrust into a bottle. There were central lines in great number, somewhat sinuous though never crossing, diverging one by one toward the shores on either hand, where they curved backward with complex interferences in large reversing arcs and many minute circlings. The straightening out of the curves in perspective was quite perceptible toward Boca Infierno, and beyond it was pronounced. The air appeared to be still, so that the current pattern was not at all obscured by waves; and the spectacle of the broad strait, appearing almost beneath us, inlaid with a crowded design of sweeping fine lines, the delicate clearness of which recalled a steel engraving, was peculiarly impressive. That we had been fortunate in the moment of reaching the summit was apparent next day. The spectacle was, indeed, repeated at sunrise and for a short period thereafter, though the general design was markedly different, and less intricacy of pattern was discernible, while the general effect was comparatively vague; perhaps the shadow of Sierra Seri was too heavy, or, more probably (as was my impression at the time), our position was not favorable for that direction of illumination. In full light during the day up to the hour of our departure in late afternoon, no hint or vestige of the current design remained. It was evident that the lines were brought out with especial clearness by the favorable illumination and comparative stillness of air; and it was particularly evident that the lines marked movements in the water, even if there were corresponding air-currents, since they harmonized perfectly with the configuration of the shores and with the trend of spits and bars and offshore markings seen through the shallow waters, especially toward the northern end of the strait. The accord between shore curves and the current lines seen in the evening indicated a southward motion much more vigorous than the reverse movement witnessed next morning; for the marked variation in the design noted in the morning was of a character strongly suggesting a reversed movement of the water, while the faintness of the markings then may perhaps have been due to comparative feebleness of current rather than to unfavorable lighting. Certainly the close agreement between the elaborate system of markings, so clearly revealed in the evening, and the prevailing curves of the shores would seem to indicate unmistakably that, whatever the direction and strength of flow, the markings were a product of current motion."

SUMMARY HISTORY

There is some doubt as to who was the first among the Caucasian explorers of the Western Hemisphere to set eyes on the Seri Indians. 175 Nuño de Guzman, rival of Cortés and invader of Jalisco and Sinaloa, must have appoached the southern boundary of Seri territory about 1530, though there is no record of contact with these tribesmen. Diego Hurtado de Mendoza, one of Cortés' captains, coasted along southern Sonora in 1532 to a point considerably beyond Rio Yaqui, where he was massacred on his return, and hence left no record of more northerly natives.[1] Both of these pioneers must accordingly be eliminated from the list of probable discoverers of the Seri.

In the course of their marvelous transcontinental journey, Alvar Nuñez Cabeza de Vaca and his companions also approached Seriland, and apparently skirted its borders shortly before meeting Captain Diego de Alcaraz, of Guzman's party; this was in April, 1536, according to Bandelier.[2] Vaca wrote: "On the coast is no maize; the inhabitants eat the powder of rush and of straw, and fish that is caught in the sea from rafts, not having canoes. With grass and straw the women cover their nudity. They are a timid and dejected people."[3] He added half a dozen ambiguous sentences, of which only a part, apparently, refer to the "timid and dejected people"; half of these describe a poison used by them "so deadly that if the leaves be bruised and steeped in some neighboring water, the deer and other animals drinking it soon burst". The people were identified as Seri (Ceris) by Buckingham Smith and General Stone,[4] and the identification may be [114] considered as strongly probable, provided the Tepoka be classed with the Seri.

The next Caucasians to approach Seriland appear to have been the two Spanish monks, Fray Pedro Nadal and Fray Juan de la Asuncion, who, in 1538, sought to retrace Vaca's route, and traveled northward to a river somewhat doubtfully identified as the Gila;[5] but the meager accounts of this journey contain no clear reference to the Seri Indians.

On March 7-19, 1539, the Italian friar Marcos de Niza left San Miguel de Culiacan under instructions from the Viceroy, Don Antonio

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[1] Theodore H. Hittell, History of California, 1885, vol. i, pp. 43-44.

[2] Contributions to the History of the Southwestern Portion of the United States (Hemenway Southwestern Archæological Expedition), Papers of the Archæological Institute of America, American series, v, 1890, p. 44.

[3] Relation of Alvar Nuñez Cabeça de Vaca, translated from the Spanish by Buckingham Smith; New York, 1871, p. 172.

[4] Ibid, p. 176.

[5] Cf. Bandelier, Magazine of Western History, iv, 1886, p. 659.

113

×175 de Mendoza, to explore the territory traversed by Vaca, under the guidance of the negro Estevanico, the only one of Vaca's three companions remaining in Mexico; in good time he reached a point probably not far from the center of the present state of Sonora, whence messengers were sent coastward to return duly accompanied by certain "very poor" Indians wearing pearl-oyster (?) ornaments, who were reputed to inhabit a large island (almost certainly Tiburon) reached from the mainland by means of balsas. Bandelier identified these coastwise 114 Indians with the Guayma tribe, a supposed branch of the Seri;[1] but if the "large island" were Tiburon, it would seem more probable that ×175 the Indians belonged to the tribe now known as Seri, while both description and location suggest the Tepoka. This record is of questionable weight, partly by reason of the doubtful identification of the Indians, and partly because the friar's itinerary was found to be misleading by his immediate successors, because of the fact that portions of his narrative were based on hearsay; though it is just to note that Bandelier, after critical study, deemed the record about as trustworthy as others of the time, and to add that the disparagement of Niza's discoveries by his followers was in accord with the fashion of the day—indeed it was little more severe relatively than the criticism of the strikingly trustworthy Ulloa by his first follower, Alarcon.

×175 On July 8-19, 1539, according to the collection of Ramusio, three vessels sent out by Cortés to discover unknown lands—"Of Which Fleete was Captaine the right worshipfull knight Francis de Vlloa borne in the Citie of Merida"—sailed from Acapulco.[2] Skirting the mainland northwestward, they explored Mar de Cortés, or Gulf of California; and on September 24 (as fixed by interpolation from Ulloa's excellent itinerary) they descried and described the features of the coast in such fashion as to locate their vessels (one was already lost) off the southern point of Tiburon, and in sight of the islands of San Esteban and San Lorenzo, as well as locally prominent points on the mainland of Lower California. Here they "discerned the countrey to be plaine, and certaine mountaines, and it seemed that a certaine gut of water like a brooke ran through the plaine" (p. 322). Judging from other geographic details, this "gut of water" was certainly the tide-torn gateway now named Boca Infierno; while the next day's sailing (it is noteworthy that this was "north" instead of northwestward as usual) carried them by "a circuit or bay of 6 leagues into the land with many cooues or creeks", evidently Bahia Tepopa with the northern end of the turbulent strait El Infiernillo. The record shows clearly that Ulloa discovered Tiburon, but failed (quite naturally, in view of the route pursued and the peculiar configuration at both extremities of the strait) to perceive its insular character. No mention is made of inhabitants or habitations on this land-mass, though both are described on the

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[1] Ibid, pp. 681-682; Papers of the Archæological Institute of America, American series, v, p. 118.

[2] The Voyages of the English Nation to America, collected by Richard Hakluyt and edited by Edmund Goldsmid, 1889, vol. iii, p. 317.

+175 few degrees farther northward on the long-mysterious coast below the elusive "Straits of Anian".

About the middle of September, 1540, Captain Melchior Diaz, then 7 in command at Corazones, selected 25 men from the force remaining at that point, and set out for the coast on what must have been one of the most remarkable, as it is one of the least-known, expeditions in the history of Spanish exploration; for he traversed either the streamless coast or the hardly more hospitable interior through one of the most utterly desert regions in North America, from the lower reaches of Rio Sonora to the mouth of the Colorado. The record of [114] this journey is meager, ambiguous, and apparently inconsecutive; it indicates that he encountered the Indian giants seen by Maldonado, but confused them with the Indians of the Lower Colorado. On the return journey Diaz lost his life through an accident, and his party reached Corazones on January 18, 1541, after encountering hostility from Indians not far from that settlement. Word was sent to Coronado, then in winter quarters on the Rio Grande, who dispatched Don Pedro de Tovar to the settlement for the purpose of punishing the hostile natives; he, in turn, sent Diego de Alcaraz with a force to seize the "chiefs and lords of a village". This Alcaraz did, but soon liberated his prisoners for a petty exchange. "Finding themselves free, they renewed the war and attacked them, and as they were strong and had poison, they killed several Spaniards and wounded others so that they died on the way back. . . . They got back to the town, leaving 17 soldiers dead from the poison. They would die in agony from only a small wound, the bodies breaking out with an insupportable pestilential stink."[1]

The Coronado expedition had still further experience with (evidently) the same Indians; for as the army approached Corazones on the return a soldier was wounded. and was successfully treated, according to the record, with the juice of the quince. "The poison, however, had left its mark upon him. The skin rotted and fell off until it left the bones and sinews bare, with a horrible smell. The wound was in the wrist, and the poison had reached as far as the shoulder when he was cured. The skin on all this fell off."[2]

There is some question as to the identity of the Indians met by Diaz's men, Alcaraz and his force, and the Coronado army near Corazones; but various indications point toward the Seri. In the first place, the several Indian settlements mentioned in the records define what must have been then, as it was two centuries later, the Seri frontier, beyond which lay the "despoblado" of Villa-Señor, i. e., the immense area hunted and harried by roving bands from Tiburon; so that the Seri must frequently have crossed the paths pursued by the Spanish pioneers. In the second place, the accounts themselves seem to be typical records of contact with Seri Indians, which might be repeated for each subsequent episode in their history or century in time. The description of the effect of the poison is especially suggestive of the Seri; as pointed out on a later page, the Seri arrow-venom is magical in motive, but actually consists of decomposing and ptomaine-filled organic matter, so that it is sometimes septic in fact, while the arrow-poison of the neighboring Opata, Jova, and other Piman tribes was (so far as can be ascertained) vegetal; and these accounts seem to attest septic poisoning rather than the effects of any known vegetal toxic.[1] 175 x [171] [278]

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[1] Winship, op. cit., p. 502.

[2] Ibid., p. 538.

Such (assuming the validity of the several identifications) are the earliest records concerning the truculent tribesmen and the desolate district known centuries later as the Seri and Seriland.

About 1545 began the Dark Ages in the history of northwestern Mexico; the excursion of Guzman, and the journeys of Cabeza de Vaca and Friar Marcos and of Coronado himself, died out of the memory of the solitary adventurers and scattering settlers who slowly infused Spanish culture and a strain of Caucasian blood into the Sonoran province; even the route taken by Coronado's imposing cavalcade was lost for centuries, to be retraced only during the present generation, largely through the determinations of Simpson, Bandelier, Winship, and Hodge.[2] It is true that Don Francisco de Ibarra penetrated the territory in 1563, and remained until rumors of gold in other districts drew him elsewhere; it is also true that Captain Diego Martinez de Hurdaide pushed into the province in 1584, and entered on a career of subjugation, waging persistent war with the Yaqui, which resulted in the acquisition of the territory of Sonora by treaty April 15, 1610;[3] yet few records of exploration or settlement were written before the advent of the Jesuit missionaries, toward the end of the seventeenth century. [114]

Still more astounding was the eclipse of knowledge of the gulf. Despite Ulloa's survey of the entire coast, recorded in an itinerary so detailed that every day's sailing may readily be retraced, and despite Alarcon's repetition of the surveys and extension of the discoveries far up Rio Colorado (where his work was verified by that of Melchior Diaz), a mythic cartography arose to shadow knowledge and delude exploration for a century and a half; for "upon the authority of a Spanish chart, found accidently by the Dutch, and of the authenticity of which there never were, or indeed could be, any proofs obtained, an opinion prevailed that California was an island, and the contrary assertion was treated even by the ablest geographers as a vulgar error";[4] and a mythic strait formed by cartographic extension of the Gulf of California indefinitely northward haunted the maps of the seventeenth century. This error was adopted by various geographers, including Fredericus 114 175 x

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[1] It should be noted that Mr. F. W. Hodge, whose large acquaintance with the Southwest and its literature gives his opinion great weight, is inclined to class the Indians in question as Opata. [114]

[2] Op. cit., pp. 29-73.

[3] Sonora Histórica y Descriptiva, por F. T. Dávila, 1894, p. 8. [113]

[4] A Natural and Civil History of California; translated from the original Spanish of Miguel Venegas; London, 1759, vol. i, preface.

114
175 de Witt in 1662, Peter van der Aa in 1690, and even Herman Moll so late as 1706; but it was consistently rejected by Guillaume Delisle and other French geographers. The myth was finally punctured by Padre Kino in 1701; though even he and all his erudite co-evangels were apparently unaware that his observations only verified those of Ulloa, Alarcon, and Diaz.

175 During the stagnant sesquicentury 1545–1695 there was little record of the Seri Indians, though that little indicates recognition of their leading characteristics and their insular habitat. Writing especially of the Yaqui before 1645, Padre Andrés Perez de Ribas declared (freely translated):

> There is information of a great people of another nation called Heris; they are excessively savage, without towns, without houses, without fields. They have neither rivers nor streams, and drink from a few lagoonlets and waterholes. They subsist by the chase, but at harvest time they obtain corn by bartering salt extracted from the sea and deerskins with other nations. Those nearest to the sea also subsist on fish; and it is said that there is, in the same sea, an island on which others of the same nation live. Their language is exceedingly difficult.[1]

The same author mentions cannibalism among the aborigines of northwestern Mexico, saying:

> The vice of those called anthropophagi, who eat human flesh, introduced by the devil, enemy of the human genus, among nearly all these nations during their heathenism, is more or less common. In the Acaxes and mountains this inhuman vice is customary as eating of flesh obtained by the chase; it is of daily occurrence among them; just as they sally in chase of a deer, they go out over mountains and fields in search of enemies to cut in pieces and eat roasted or boiled.[2]

[114] There is nothing to indicate that the anthropophagy was confined to, or even extended to, the Seri—a fact of interest in connection with later opinion. Ribas' reference to an island inhabited by the Heris (Seri) indicates that the occupancy of Tiburon was fully recognized by the native tribes of the region.

Throughout the seventeenth century the western coast of Gulf of California, and in lesser degree the eastern coast also, became famous for pearl oysters, and expeditions were sent out and fisheries established at different times. The earliest of these expeditions was that of Captain Juan Iturbi in 1615; he sailed well up the gulf, reaching latitude 30° according to his reckoning (though the accounts imply between lines that he turned back at the Salsipuedes), collecting many pearls along the western coast "so large and clear that for one only he paid, as the King's fifth, 900 crowns";[3] and on his return he carried the fame of the Californian pearls to Ciudad Mexico, whence it resounded to Madrid and reverberated through all Europe. One of the more noteworthy

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[113] [1] *Historia de los Trivmphos de Nvestra Santa Fee entre Gentes las mas Barbaras y Fieras del Nuevo Orbe*; Madrid, 1645, p. 256. The "Heris" are identified as Seri by Bandelier (Final Report of Investigations among the Indians of the Southwestern United States, in Papers Arch. Inst. Am., American series, iii, 1890, p. 74).

[2] Op. cit., p. 11.

[3] Venegas, op. cit., vol. i, p. 182.

Now, this itinerary recounts, in definite and unmistakable terms, the incidents and localities of a journey down the valley of Rio San Ignacio 114 (also called Santa Magdalena, Altar, Ascuncion, Pitiquito, Caborca, 1754 etc, in different parts of its course), from the present city of Santa Magdalena by the present town of Caborca to the coast at a point almost directly west of both Caborca and Santa Magdalena. Moreover, Kino's map of 1702[1] locates "Nazareno" on this river, and permits identification of the sierra with Dewey's "three conspicuous peaks" placed directly inland from the lagoon at the mouth of San Ignacio river, on the Hydrographic Office charts; it also locates Caborca (miswritten "Cabetka") in approximate position. Furthermore, it would have been physically impossible for the rather heavily outfitted Kino party, with carriages and churchly equipage, to traverse the untrodden and forbidding wastes from Caborca to even the nearest part of Seriland within the period of two days and a fraction, and the distance of 29 leagues (some 74 miles), detailed in the itinerary. The direct way from Caborca to Tiburon would lie due southward, over sierra-ribbed and barranca-cut plains never yet explored by white men, nor even traversed by Indians so far as known, for more than 100 miles in an air line; while the nearest practicable route, passing by way of Cieneguilla, Las Cruces, Pozo Noriega, Bacuachito, Sayula, Tonuco, Rancho Libertad, and Barranca Salina (or Aguaje Parilla) measures fully 200 miles, and requires at least six days for the passage with good horses and light equipage. The Kino party might, indeed, have turned southwestward at Caborca and pushed to the now abandoned landing at the anchorage below Cabo Lobos;[2] but the directions and distances specifically stated, and the specific identification of Rio San Ignacio at the end and at other points of the journey, all prove that this was not the route actually traveled. The terminus of the trip so clearly fixed by the itinerary is over 100 miles from the nearest point of Seriland proper; moreover, Tiburon is rendered invisible both from the coast and from Cerro Nazareno not only by distance, but by intervening sierras, notably those projecting into the Gulf to form Cabo Lobos and Punta Tepopa. It follows that Kino and Mange completely missed Seriland in their expedition to the coast, and there is nothing to indicate that they ever saw the Seri tribesmen. Their descriptions of the Indians encountered fairly fit the peaceful Papago of the interior and the timid Tepoka of the coast; and neither Mange's narrative nor other contemporary records suggest contact between the exploring party and the distinctive holders of Tiburon. The specific and repeated references in the itinerary to the island of San Agustin, or Tiburon, evidently relate to the ancient Isla de Santa

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[1] Tabula Californiæ, anno 1702 (Via terrestris in Californiam comperta et detecta per R. Patrem Eusebium Fran. Chino è S. I. Germanum. Adnotatis novis Missionibus ejusdem Societ. ab anno 1698 ad annum 1701), in Stocklein, Der Neue Welt-Bott, Augspurg und Grätz, 1726. [113]

[2] Elaborately mapped and established (on paper) as the "Puerto y Villa de la Libertad" in 1861 (Boletin de la Sociedad Mexicana de Geografia y Estadistica, 1863, x, p. 263 et seq.), and actually maintained from 1878 to 1884 as the port of *Libertad* (not the abandoned Rancho Libertad on the border of Seriland), or Serna, according to Dávila (Sonora Histórico y Descriptivo, pp. 149, 309).

114 x175 Inas, the modern Isla Angel de la Guarda,[1] one of the most prominent geographic features visible either from Cerro Nazareno or from the adjacent coast. There is no reason to infer that Kino or any of his party ever detected their error in identification of geographic features which must have been conspicuous in the lore of the aborigines and settlers of Sonora; indeed, the error well attests the prominence of the Seri and their habitat in the local thought of the time.[2]

x175 An effect of the Jesuit invasion was to give record to episodes growing out of alien contact with the Seri. One of the earliest of these records recounts nocturnal raids by the "Seris Salineros" for robbery and murder in the pueblos of Tuape, Cucurpe, and Magdalena (de Tepoca).[3] In January, 1700, Sergeant Juan Bautista de Escalante set out with fifteen soldiers to this mission of Santa Magdalena de Tepoca on an expedition of protection and reprisal; and here he learned that the "Seris Salineros" had killed with arrows three persons. Taking their trail, he reached Nuestra Señora del Populo only to find that ten families of converts had deserted to steal cattle, whereupon he started in search of them; he overtook them 20 leagues away, and, despite armed resistance on their part, arrested and whipped them and returned them to the pueblo. Among the captives were two "Seris Salineros" concerned in the murders at Tepoca, and three others guilty of similar outrages at the Pueblo de los Angeles de Pimas Cocomacagties; these he executed as a warning to the others, after taking their depositions and confessions, and after they were shrived by Padre Adano Gilo (or Adan Gilg), the priest of Populo. This duty performed, he resumed the trail of the Seri, accompanied by the padre; and, approaching the sea, he found a port, as well as an island to which most of the Seri had escaped in balsas, leaving eight of their number, who were arrested and turned over to the priest.[4]

This is the first record of actual invasion of Seriland by Caucasians. According to Bancroft, it "may be deemed the beginning of the Seri wars which so long desolated the province".[5]

The next noteworthy episode occurred when Sergeant Escalante, who had returned to Tuape and Santa Magdalena (de Tepoca), again set out for the coast on February 28, 1700, taking a new route (probably down Rio Bacuache). He traveled 30 leagues, passing four watering places, and on March 6 arrived at the Paraje de Agúas Frias (probably

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[113] [1] Identified by Alexandre de Humboldt in his Carte Générale du Royaume de la Nouvelle Espagne, of 1804 (in Atlas Géographique et Physique, Paris, 1811). So late as 1849 the old name was sometimes retained, e. g., on Robert Greenhow's map accompanying his History of California and Oregon.

[2] In one of the last letters from his pen, dated November 25, 1898, the late Dr Elliott Coues wrote, "I find you trailing Kino and Mange in 1694 precisely as I had them, and I make no doubt of the substantial accuracy of your typewritten MS. I accept your position that the large island they sighted and named San Agustin was not Tiburon, but Angel de la Guarda Isl."

[113] [3] A mission founded in 1699 by Padre Melchor Bartiromo (Historia de la Compañia de Jesus en Nueva España, que esta escribiendo el P. Francisco Javier Alegre, 1842, tomo III, p. 117), of which the location has long been lost.

[4] Resumen de Noticias, op. cit., tomo I, p. 321.

[5] Op. cit., p. 275 (the year is misprinted 1800 on this page and in the index).

175x

Poso Escalante or Agua Amarilla of recent maps); there, three nights later, he was attacked by archers, who discharged arrows into the soldiers' camp and immediately fled. Subsequently, seeking their enemies close to the sea 20 leagues away (probably on the eastern shore of El Infiernillo), Escalante and his men were joined by 120 Tepoka people; and, failing to find their assailants, they gave these allies a supply of provisions and turned them over to Padre Melchor Bartiromo, who allotted to them, in conjunction with 300 deserters from the missions who had been captured by the soldiers, not only lands but corn for sowing and eating. Having thus disposed of the Indians, Escalante and his soldiers returned to the coast on March 28, 1700, to punish the boldness and pride of the Indians in their stronghold ("los indios seris de la ranchería del medio"). Passing by balsas to the island, "they overtook those who caught up bows and arrows to fight, of whom they slew nine as an example to the others"; and these others they captured and sent to the priest at Populo—after which the party returned to Cucurpe in time to celebrate Holy Thursday on April 8.[1]

This contemporary recital, written by Escalante's acquaintance and rival in exploration and subjugation, Juan Mateo Mange, bears both internal and external evidence of falling well within the truth. It is corroborated and extended by Alegre's version, written forty or fifty years later on data at least partially independent: according to Alegre, Escalante and his soldiers went on balsas to the "Isla de los Seris, which is called San Agustin by some, but more commonly Tiburon". He added that the retreats of the Seri after the murders and robberies committed at the pueblos of Pimeria, as well as the abundant pearl fisheries, have made this place highly noted ("muy famosa"); and he correctly described the strait and the projecting sand-banks opposite the center of the island, which reduce the open water to a width of barely half a league: "At this constriction the Seri cross in balsas composed of many slender reeds, disposed in three bundles, thick in the middle and narrowing toward the ends, 5 and 6 varas in length. These balsas sustain the weight of four or five persons, and with light two-bladed paddles 2 varas in length cut the water easily." He remarked also that while a part of the Seri seen on the island by Escalante were captured the major portion escaped, "fleeing with great swiftness".[2] [14]

The early record is also corroborated, in a manner hardly credible in regions of more rapid social and physiographic development, by local tradition and by the survival of the well excavated by the party and still bearing Escalante's name. [14]

On the whole it may be considered established that Sergeant Escalante crossed El Infiernillo and visited Tiburon in 1700; and, although it may be possible that pearl fishers or others preceded him, he must be credited with the first recorded exploration of strait and island by white men.

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[1] [illegible] de Noticias, op. cit., tomo i, pp. 221-222.

[2] Op. cit., tomo iii, pp. 117-118.

114
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The specific references to the Seri and their insular habitat by Ribas, by Kino and his chronicler, and by the various recorders of Escalante's expeditions, establish the extent of the lore concerning people and place, even before the end of the seventeenth century. This lore found measurable expression in maps prepared in Europe, even by those cartographers who purposely or otherwise ignored the surveys of Ulloa and Alarcon. In his "newest and most accurate" map of America, 1662, Fredericus de Witt depicted the Gulf of California ("Mare Vermio olim Mare Rvbrvm") as extending northward to connect with the mythic Strait of Anian ("Fretum Aniani"), yet he located Rio Colorado ("R. de Tecon") and Rio Gila ("R. de Coral") approximately, placing the largest island in the gulf, named "I. Gigante", just off their (common) embouchure;[1] and an anonymous map of the Pacific ocean, apparently by the same author and of closely corresponding date, is essentially similar.[2] The map of the northern part of America by Peter van der Aa, about 1690, is also similar, though on smaller scale;[3] and the same may be said of that cartographer's new map of America, issued about the same time, in which the island is designated "I. de Gigante".[4] A somewhat later map by Van der Aa (although supposed to have been issued in 1690) is greatly improved; the "Mer de Californie" is brought to rather indefinite end a little above the mouth of Rio Colorado ("R. de bona guia"); the "Pimases" are placed in proper position with respect to the Gila ("R. de Coral"), and the "Herises" are located a third of the way and the "Ahomeses" half way down the gulf; while a greatly elongated island stretches from the one to the other off the province of "Sonora".[5] The origin of the name "Gigante" is uncertain; it may be borrowed from a land feature. As used in some cases it apparently connotes the size of the island, while the use in other cases evidently connotes gigantic inhabitants.

Naturally, in view of the slow and imperfect diffusion of knowledge characteristic of early times, cartographers were dilatory in introducing the observations of Kino and Escalante. The map of America by Herman Moll, about 1708,[6] represents the "Gulf of California or Red Sea", connecting the "South Sea" with the "Straits of Annian", and depicts Rio Colorado ("Tison R.") and a composite river apparently designed to represent Rio Gila (made up of "R. Sonaca", "R. Azul", and "R. Colorado", with two other long tributaries from the south) embouching separately a little below midlength of the gulf. Somewhat above these are three islands, one of which is designated "Gigate

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113

[1] Novissima et Accuratissima Septentrionalis ac Meridionalis Americae, Amsterdam. (In American Maps, 1570-1796, Library U. S. Geological Survey, 135.)

[2] Mar del Zvr, Hispanis, Mare Pacificum. (Ibid., 139.)

[3] 'T Noorder Deel van America, Leyden. (Ibid., 178.)

[4] Nouvelle Carte de l'Amerique, Leyden. (Ibid., 186.)

[5] L'Amerique Septentrionale Suivant les Nouvelles Observations, etc., Leyden. (Ibid., 181.) This island is not named, but is undoubtedly the Santa Ines of several other maps—the Angel de la Guarda of the present.

[6] North America, according to ye Newest and most Exact Observations, etc., London. (Ibid., 88.)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Isle", while "Pimeria" is located correctly with respect to Rio Gila, though too close to the sea, and "R. Sonora" is located too far southward, with a province of the same name just north of it. There is no reference to the Seri, but a locality in Lower California opposite Sonora is named "Gigante".[1] Quite similar is the map of North America drawn and engraved by R. W. Seale about 1722, though the provinces of Pimeria and Sonora are brought closer together, while the magnified Gila is named Colorado ("Tison R." also being retained).[2] The map of North America presented to the Duc de Bourgogne by H. Iaillot about 1720 is much the same; the "Isle de Californie" is separated from the continent by "Mar Vermejo ou Mer Rouge" with four islands, of which the southernmost, "I. de Gigante", lies somewhat below the separate mouths of "R. de Tecon" and "R. de Coral", while the extravagantly magnified Gila of previous maps is partially replaced by a still more extravagant "R. del Norte", rising in a mythical lake above the fortieth parallel and falling into the gulf under the thirtieth.[3] The map of Mexico and Florida by Guillaume "De l'Isle", published in Amsterdam by Covens and Mortier, 1722, patently begs the question as to the northern extension of "Mer de Californie" by cutting off the cartography at the critical point. "R. del Tison" is retained as a subordinate river, while the separate and greatly magnified Gila corresponds with that of the Iaillot map, the upper tributary being "R. Sonaca ou de *Hila*"; "R. di Sonora" is depicted in approximate position, with the province of the same name extending northward and "Seris" located a little above the mouth of the river. No islands are shown in the vicinity, but the name "Gigante" appears on the western coast of the gulf, about latitude 26°.[4] The map of North America by the same author, supposed to date about 1740 though probably earlier, recalls the Van der Aa map of 1600 (?); "Mer de Californie ou Mer Vermeille" ends doubtfully about latitude 34°, where "R. de bona guia" and "R. de Coral" bound the "Campagne de bona guia", and fall separately into the gulf near its head; the "Pimases", "Herises", "Sumases", "Aibinoses", and "Ahomeses" are distributed thence southward along the coast to about the twenty-eighth parallel, while a nameless island stretches parallel with the coast of "Sonora" from about 28° to 32°.[5]

114 175

With one or two exceptions, these maps demonstrate the prevailing neglect or ignorance of the classic explorations along the western coast of America early in the sixteenth century; yet they introduce features representing vague knowledge of the Seri Indians and their insular habitat, undoubtedly derived (like that of Padre Kino and Sergeant Escalante anterior to their expeditions) from native sources.

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[1] Doubtless the mountain "La Giganta", named by Admiral Otondo toward the end of the seventeenth century (Documentos para la Historia de Mexico, cuarta série, 1857, tomo v, p. 122), and noted by Hardy in 1828 (Travels in Interior of Mexico in 1825, 1826, 1827, and 1828, London, 1829, p. 243).

113

[2] A map of North America, with the European Settlements and whatever else is Remarkable in ye West Indies, from the latest and best Observations. (American maps, loc. cit., 119.)

[3] Amerique Septentrionale Divisée en Ses Principales Parties. (Ibid., 108.)

[4] Carte du Mexique et de la Floride, des Terres Angloises et des Isles Antilles, etc. (Ibid., 126.)

[5] L'Amerique Septentrionale . . . par G. de l'Isle: Amsterdam, Chez Pierre Mortier. (Ibid., 172.) The island is, of course, Santa Inez, i. e., Angel de la Guarda.

114
175

The Kino map of 1702 gradually came to be recognized as trustworthy in important particulars, and brought to an end the baseless extension northward of the gulf; yet it was seriously inaccurate in details, particularly those affected by the erroneous identification of the second-largest island in the gulf with the largest. Accordingly Isla Santa Ines (the modern Isla Angel de la Guarda) is omitted from its proper position, and replaced by "I. S. August" close to the eastern coast; yet the land-mass of Tiburon is roughly defined as a peninsula bounded on the north by "Portus S. Sabina" (Bahia Tepopa) and on the south by "Baya S. Ioa. Bapt." (Bahias Kunkaak and Kino). Two other considerable islands are represented as dividing the width of the bay west-southwest of "I. S. August", and are named "2. Salts-Insel"; although evidently traditional, their positions correspond roughly with those of San Esteban and San Lorenzo. The map locates the "Topokis" between Rio San Ignacio and Rio Sonora, with the "Guaimas" immediately below the latter.[1] Kino's three pier-like islands bridging the gulf were adopted in Delisle's map of America, published in Amsterdam by Jean Covens and Corneille Mortier about 1722, in greatly reduced size, though larger islands are shown farther northward; and an ill-defined peninsula corresponding to Tiburon is retained.[2] The D'Anville map of 1746 embodies Kino's discoveries about the head of the gulf and retains his pier-like islands, yet not only corrects his error in omitting the second greatest island of the gulf, but perpetuates equal error in the opposite direction: "I. de S. Vicente" is made the largest of the islands and located near the western coast a little below the mouth of Rio San Ignacio, while "I. de Sta. Inés" is made second largest and is located southeast of it and near the eastern coast. The third island in size is named "Seris", while the fourth and fifth, completing the Kino trio, are called "Is. de Sal", and the mainland projection remains defined on the south by "B. de S. Juan".[3] The Vaugondy map of 1750 locates the transverse trio of islands in greatly reduced size, and omits the larger islands of the gulf.[4] The islands, etc., of the Covens and Mortier map of 1757 correspond closely with D'Anville's map of 1746, and a nameless bay defines a peninsula in the position of Tiburon.[5] The Pownall map of 1783 also follows that of D'Anville so far as the islands are concerned, though the position of that corresponding to the present Angel de la Guarda lies beyond the limit of the sheet; "I. de Inez" lies some distance below the mouth of "Sta. Madalena" river, off the territory of the "Sobas" and "Seris"; "Seris I." is smaller, the two "Sall Is." are smaller still, and there is an ill-defined projection of the mainland, bounded on the south by "B. de S. Juan".[6]

While the makers of the later of these maps were engaged in perpet-

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113

[1] Map in Stocklein, op. cit.

[2] Carte d'Amerique, etc. (American maps, loc. cit., 26.)

[3] Amérique Septentrionale . . . par le Sr. d'Anville, Paris. (Ibid., 30 and 31.)

[4] Amérique Septentrionale . . . par le Sr. Robert de Vaugondy, Paris. (Ibid., 37.)

[5] L'Amerique Septentrionale, etc., Amsterdam. (Ibid., 105.)

[6] A new map of North America, with the West India Islands. . . . Laid down according to the Latest Surveys, and Corrected from the Original Materials of Govr. Pownall, London. (Ibid., 22.)

114
175

uating the vestigial features, erroneous and otherwise, of the Kino map, the Jesuits of peninsular California employed themselves in reexploration of the western coast of the gulf, a particularly productive expedition being that of Padre Ferdinando Consag, in 1747. The padre's map represents the western coast in considerable though much distorted detail, and depicts "I. del Angel de la Guarda" as a greatly elongated body, a third of the way across the gulf from the western coast; next in size is "I. d S. Lorenzo"; then come "I. d S. esteban" in the middle of the gulf, and in the same transverse line, but quite near the eastern coast, "I. d S. Agustin", the two being approximately equal in size, while above and about equidistant from them is "I. de S. Pedro", about half so large as either. These, with four smaller islands near the western coast, bear the general designation "Islas de Sal, si puedes", which in this case may be translated "Salt (possibly) islands," though later forms of the name imply a quite different meaning, i. e., "Islands of Get-out-if-(you-)can", or "Get-out-if-canst".[1] The eastern coast shows two deep indentations named "Tepoca" and "Bahia d S. Juan Bautista" bounding a peninsula corresponding in position to insular Seriland.[2] It is evident that the cartography of the eastern coast is based on that of Kino, that the island of San Agustin is hypothetic, and that the land-mass of Tiburon proper is not separated from the mainland, while San Pedro island is apparently the Isla Patos of the present. The more general map by Venegas combines details of the Consag, Kino, and other maps; "I. del Angel de la Guarda" is greatly magnified and placed somewhat too far northward, while both San Lorenzo and San Esteban are made much larger than "I. San Agustin", which is represented as scarcely larger than "I. de S. Pedro"; the mainland is indented to

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[1] It seems probable that various early cartographers were misled by the traditional lore of "salineros", or salt-making Indians, in combination with the unusual designation of these islands. In his text Padre Consag rendered the term "Sal-si-puedes", and strongly emphasized the violent tidal currents and consequent dangers to vessels which suggested the vigorously idiomatic designation to early navigators (Venegas, Noticia de la California, III, p. 160); in the Venegas map (ibid., tomo I, p. 1) the name is used without the qualifying comma, and in the text it is hyphenated "Sal-si-puedes", the author observing concerning the local currents, "These currents run with astonishing rapidity, and their noise is equal to that of a large rapid river among rocks; nor do they run only in one direction, but set in many intersected gyrations" (A Natural and Civil History of California, p. 62). And the "Sacerdote Religioso", whose letters place him among the authorities on Lower California, wrote: "In the narrows of the gulf are a multitude of islets, for the passage being so dangerous to vessels they are called *Sal si puedes*" (Noticias de la Provincia de Californias, Valencia, 1794, p. 11); while Hardy, who navigated this portion of the gulf early in the present century (Travels in the Interior of Mexico, London, 1829, p. 270), mentioned a passage "between the islands called 'Sal si Puedes' (get back if you can)". So, too, Duflot de Mofras wrote of "les îles de Sal si puedes (Sors si tu peux)" in his Exploration du Territoire de l'Orégon, Paris, 1844, p. 210. Bancroft properly reduced the obscure connective phrase to the single denotive term "Salsipuedes," and noted the signification as "Get out if thou canst" (North Mexican States, vol. I, p. 444). In 1873-1875 Dewey restricted the name to a single island and a channel, and emphasized the currents in the latter "against which sailing vessels found it almost impossible to make any headway" (The West Coast of Mexico, Publication 56, U. S. Hydrographic Office, Bureau of Navigation, 1880, p. 113), and rendered the name "Sal-si-puedes" in the text, "Sal si puedes" on the charts. Hittell's reference to "the group of islands then known as Salsipuedes, the largest of which is now called Tiburon" (History of California, vol. I, p. 225), doubtless expresses the early use of the term precisely, save that the present Tiburon was long treated as a part of the mainland, while its names were applied to Isla Turners or some other islet. Vide postea, p. 45.

[2] Seno de California, etc., in Venegas, Noticia de la California, tomo III, p. 194.

114 +175 great depth by Kino's "Pto. de Sta. Sabina" and "Bahia de Sn. Juan Baptista", in such wise as to define a decided peninsula, while the "Seris" are located 2° farther southward and below Rio Sonora, and the "Guaimas" still farther down the coast.[1] Another illustration of the chaotic notions of the time is afforded by the Baegert map, published in 1773, and credited largely to Consag.[2] The sheet locates the author's routes of arrival (1751) and departure (1768), the former overland from far down the coast to the mouth of "Torrens Hiaqui," and thence directly across "Mare Californiae", via "Tiburon" (lying just off the mouth of the river, in latitude 29°), with the usual congeries of islands, headed by "I. S. Ang. Gart" (Angel de la Guarda), in latitude 30°–31°, and the usual shore configuration above the debouchure of Rio Sonora; "Los Seris" are located in the interior between Rio Sonora and "Torrens Hiaqui", while just above the mouth of the latter lies "Guaymas M.[ission] destr. per Apostatas Seris". The Pownall map of 1786 incorporates Padre Consag's results on reduced scale, but omits the islands toward the eastern shore of the gulf.[3]

On the whole the cartography of a century indicates that the striking explorations of Ulloa, Alarcon, and Diaz were utterly neglected; it indicates, too, that Kino's observations were promptly adopted, but that his erroneous identification of the island seen from Nazareno occasioned confusion; yet there is nothing to indicate definite knowledge of Escalante's discoveries. Apparently the cartographic tangle began with the failure to discover the narrow strait traversing Seriland, coupled with hearsay notions of an insular Seri stronghold; it was complicated by Kino's erroneous identification of the hearsay island; and it grew into the mapping of a traditional islet about the position of Tiburon, and the extension of the mainland into a peninsula embracing the actual land-mass of that island[4]—the islet lying about the site of the modern Isla Tassne, and often appearing under the name San Agustin.[5] Accordingly, so far as maps are concerned, Escalante's discoveries were no less completely lost than those of Ulloa.

+175 The recorded history of the Seri Indians during the earlier two-thirds of the eighteenth century is largely one of zealous effort at conversion on the part of the Jesuit missionaries, who repeatedly approached the territory by both land and sea; yet the records touch also on events of exploration and on the characteristics of the tribe.

One of the earliest chroniclers was Padre Juan Maria de Sonora, who in 1699–1701 inspected many of the missions of Lower California and with an invocation "for the complete reduction of those unhappy savages, now involved in the shadow of death".[1] So, also, the talented author of "Rudo Ensayo", writing in 1763, says of the Seri: 175 x

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[1] Noticia de la California, tomo i, p. 1.

113 [2] California, per P. Ferdinandum Consak, S. I., et alios, in Nachrichten von der amerikanischen Halbinsel Californien. . . . Geschrieben von einem Priester der Gesellschaft Jesu (identified as Jacob Baegert by Rau, Smithsonian Report, 1863, p. 352); Mannheim, 1773.

[3] A New Map of the Whole Continent of America, London. (American maps, loc. cit., 4.)

[4] This cartography reappeared occasionally up to about the middle of the nineteenth century, as illustrated by the Greenhow map accompanying the edition of his history issued in 1845.

[5] This condition is revealed in Mühlenpfordt, Versuch einer getreuen Schilderung der Republik Mejico, etc.; Hannover, 1844.

> They have always been wild, resisting the law of God, even those who had removed from among them to Populo, Nacameri, and Angeles, and who constituted the smallest part of the nation. And even these few, in order to have constant communication with and give information to their heathen relatives, used to go, as if they could not arouse suspicion, to spy out in other villages what they wanted to know for their plans, and immediately giving the intelligence they obtained to the runaway Indians, these would act accordingly and nobody could guess how they acquired the necessary information.[2]

Again, in summarizing the relations with the tribe, this anonymous author naively remarked:

> And at the present day, notwithstanding that in different encounters during the campaign of November, 1761, and before and since then, more than forty men have been killed by our arms and over seventy women and children have been captured, still they are as fierce as ever and will not lend an ear to any word of reconciliation.[3]

In general, the Jesuit history of the Seri is clear enough with respect to the small extruded fraction, but nearly blind to the normal tribe; there is nothing to indicate clear recognition of Seriland as a hereditary habitat and stronghold; yet the records are such as to define the salient episodes in Seri history as seen from a distantly external view-point. Nor can it be forgotten that the erudite evangelists made a deep and indelible impression on the intellectual side of Sonora, and drew the strong historical outline on which their own relations to the civil authorities on the one hand and to the Seri Indians on the other hand are cast by the light of later knowledge. [114]

The discordance between the civil and military authorities and the dominant ecclesiastical order of Sonora sounded to Ciudad Mexico, and eventually echoed to Madrid, and was doubtless one of a series of factors which led to the needlessly harsh expulsion of the scholarly Jesuits in 1767—and hence to a hiatus in the history of the province and its tribes.

Although the padres knew little of the habits and customs of the "wild" Seri save through hearsay, some of their notes are of ethnologic value: Villa-Señor located them on the deserts extending from Pitic and Angeles to Tepopa bay, and added: [114]

> They hold and occupy various rancherias, and subsist by the chase of deer, bura [mule-deer], rabbits, hares, and other animals, and also on the cattle they are able to steal from the Spaniards, and on fish which they harpoon with darts in the sea, and on the roots in which the land abounds.[4]

Villa-Señor distinguished the "Tepocas", whom he combined with the x175 "Guaimas" and "Jupanguaimas". Alegre located the Seri on the coast of the gulf from a few leagues north of the mouth of Rio Yaqui to Bahia San Juan de Bautista (Bahia Kino), adding, "with them may be classed the Guaimas, few in number and of the same language".[1] Writing about the same time, José Gallardo observed: "The distinction is slight between the Seri and Upanguaima, the one and the other having the same idiom" ("Poco es la distincion que hay entre seri y upanguaima, . . . y unos y otros casi hablan un mismo idioma").[2] The author of "Rudo Ensayo" wrote: "The Guaimas speak the same language, with but little difference, as the Seris."[3] He mistook Cerro Prieto as their principal retreat; mentioned the mountains of Bacoatzi Grande, Las Espuelas, and others as other haunts; noted Tiburon and San Juan Bautista (San Esteban ?) islands as less-known shelters, and gave extended attention to "the poison they use for their arrows" as "the most virulent known in these parts"; for "even in cases where the skin only is wounded, the injured part begins to swell, and the swelling extends all over the body to such a size that the flesh bursts and falls to pieces, causing death in twenty-four hours." To test this poison, the Seri "bandage tightly the thigh or arm of one of their robust young men; then make an incision with a flint and let the blood flow away from the wound. When the blood is some distance from the incision, they apply the point of an arrow to it, steeped in the deadly poison. If at the approach of the point of the arrow the blood begins to boil and recedes, the poison is of the right strength, and the man who lends his blood for the experiment brushes it out with his hand to prevent the poison from being introduced into his veins." He was unable "to find out with certainty of what deadly materials the deadly poison is composed. Many a thing is spoken of, such as heads of irritated vipers cut at the very moment of biting into a piece of lung; also half putrefied human flesh and other filth with which I am unwilling to provoke the nausea of the reader." He added the opinion that "the main ingredient is some root."[4] Padre Joseph Och, who, with other German evangels including padres Mittendorf, Pfefferkorn, and Ruen (or Rohen), was [114] stationed in northwestern Sonora shortly before the eviction of the Jesuits, was one of the recorders of aboriginal traits and features, though his record (like that of most of his confrères) is impoverished by his failure to discriminate tribes; but one of his notes is specific:

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[1] Ibid., p. 211. It is improbable that the Seri had anything to do with this particular butchery. According to Coues, the latter padre was killed at Sonoita; and he renders the name "Ruen or Ruhen" (On the Trail of a Spanish Pioneer: the Diary and Itinerary of *Francisco Garcés*, etc., 1900, vol. I, p. 89)

[2] Op. cit., p. 233.

[3] Op. cit., pp. 185-186.

[4] Theatro Americano, p. 401.

> As an extraordinary trapping [Zierde] the Seris pierce the nasal septum and hang small colored stones, which swing in front of the mouth, thereto by strings. A few carry, suspended from the nose, little blue-green pebbles, in which they repose great faith. They prize these very highly, and one must give them at least a horse or a cow in exchange for one.[5]

113

[1] Historia de la Compañia de Jesus, p. 218.

[2] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III), 1882, p. 704.

[3] Op. cit., p. 166.

[4] Ibid., pp. 167, 168.

[5] Nachrichten von verschiedenen Ländern des Spanischen Amerika, aus eigenhändigen Aufsätzen einiger Missionare der Gesellschaft Jesu, herausgegeben von Christoph Gottlieb von Murr, erster Theil; Halle, 1809, p. 235.

It is significant fact, and one attesting the physical and intellectual distance of the padres from the normal Seri, that so few notes of ethnologic value were made during the Jesuits' régime. With a single exception, so far as is known,[1] they recorded not a word of the Seri tongue, not a distinctive custom beyond those evidently of common knowledge, none of the primitive ceremonies and ideas such as attracted their coadjutors in Canada and elsewhere. They made no reference to the alleged cannibalism so conspicuous in later lore; but their silence on this point cannot be regarded as evidential, since they were equally silent concerning nearly all the characteristic customs and traits. The neighboring Papago tribe met the invaders frankly as man to man, displaying a notable combination of receptivity and self-containment which enabled them to assimilate just so much of the Caucasian culture as they deemed desirable, yet to maintain their purity of blood and distinctiveness of culture for centuries; the Seri, on the other hand, met the invaders as enemies, to be first feared, then blinded, baiked, and bled by surreptitious and sinister devices, and finally to be assassinated through ambuscade or remorseless treachery; and it is manifest that they surpassed the gentle padres in shrewdness and strategy, using them as playthings and tools, and carefully concealing their own characters and motives the while. 114 175x

With the passing of the Jesuits, the publication of Sonoran records received a check from which the province has never completely recovered. True, the place of the order was partly taken by the Colegio Apostólico de Querétaro, which promptly dispatched fourteen Franciscan friars to Sonora, early in 1768, to take possession of the old missions and to found others;[2] it is also true that civil enactments and commissions, as well as military orders and reports, increased with the growth of population; but comparatively few of the events and actions found their way to the press. Seri episodes continued to recur with irregular frequency; according to Dávila, the Seri outbreaks and wars "exceed fifty in number since the conquest of Sonora",[3] and there are decisive indications that the Franciscan régime was not without its due quota of strife. Moreover, the period was one of somewhat exceptionally vigorous pioneering, of the initiation of mining and agriculture, and of conquest over the "despoblado" formerly ranged and inhabited by the Seri. It was during this period that the Seri were permanently dislodged from their outlying haunts and watering-places in Cerro Prieto; and it was during this period, too, that exploration and settlement were extended to Rio Bacuache with such energy as to displace the Seri from their other outlying refuge in the barrancas of this stream. But, as the events and lines of progress multiplied, the burden for the contemporary chronicler 175x

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[1] The Noticia de las Personas que han escrito ó publicado algunas obras sobre Idiomas que se hablan en la República (of Mexico), by Dr José Guadalupe Romero, includes a MS. "Vocabulario de las Lenguas Eudeve, Pima y Seris", written by Padre Adamo Gilg (Bol. Soc. Mex. Geog. y Estad., 1860, tomo VIII, p. 379). [113]

[2] Dávila, Sonora Histórico y Descriptiva, p. 16; Bancroft, op. cit., p. 672.

[3] Ibid., p. 318.

X 175 when exhumed six months later, attests the dry and saline soil in this vicinity. None of these conditions exist about Aguaje Parilla at the southeastern base of Sierra Seri. The present absence of living carrizal at Pozo Escalante is of little significance, since the extinction of the plant might easily have been wrought either by the stock of later expeditions or by the rise of the salt-water horizon accompanying the local subsidence of the land; certainly dried roots and much-weathered fragments of cane still remain about the margin of the playa extending southward from the well.

The episode culminating in the assassination of Fray Crisóstomo was characteristic: beset at all points and rankling under the invasion of their range, the Seri sought anew to delude the governor with fair words, using their own reprobates and apostates at Pitic and elsewhere to point their asseverations; and remembering the facility with which the earlier ecclesiastics were duped into unwitting allies, they made the kindly and long-suffering friars the immediate object of their petitions. But some of the tribe galled under the lengthy and still lengthening blood-feud too deeply to tolerate the alien presence; and one of these, either alone or supported by the alleged accomplices or others, tried a typical ruse, suggested less by need than inherited habit; for the friar was helpless in their hands, and might have been slain in his jacal as easily as in the open. Typically, too, the assassination initiated or deepened factional dissension and further bloodshed.

[114] The Franciscan records are of even less ethnologic use than those of the Jesuits. Beyond his incidental expressions concerning Seri character and custom in connection with the founding and abandonment of Carrizal, it need only be noted that Arricivita makes hardly a reference to the Tepoka, but habitually combines the "*Seris y Piatos*"—the latter perhaps representing the "confederate Pima" of "Rudo Ensayo", or the Soba occupying the lower reaches of Rio San Ignacio about that time.

Among the meager and scattered Franciscan records is a letter from Fray Francisco Troncoso, dated September 18, 1824, which is of note as containing an estimate of the Seri population at the time:

> This island [Tiburon] has more than a thousand savage inhabitants, enemies of those of California, and it has frequently occurred that, on balsas of reeds, . . . they have crossed over to invade the mission [of Loreto], killing and robbing some of those they found there.[1]

The record is of value also as indicating that the Seri traversed the gulf freely, and raided settlements and tribes of the peninsula ruthlessly as those of the mainland.

The Carrizal episode was followed by a half century of comparative silence concerning the Seri, though various contemporary records and later compilations indicate customary continuance of the Seri wars.

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[1] Incorporated in Escudero, Noticias Estadísticas de Sonora y Sinaloa; Mexico, 1849, p. 16.

Among the more useful compilations is that of Velasco; and among the more important episodes noted by him was the Cimarrones-Migueletes war of 1780.[1] The Cimarrones included the greater part of the Seri of Tiburon and the Tepoka (then estimated at 2,000 of both sexes),[2] together with the "Pimas called *Piatos*, of the pueblos of Caborca, Tubutama, Oquitoa, etc", and supposedly certain other representatives of the Pima and Apache, who had shortly before marauded Magdalena and sacked Saric, killing a dozen persons;[3] the Migueletes were national troops assigned to Sonora under the command of Colonel Domingo Elizondo. The forces met in several bloody battles in Cerro Prieto, at Jupanguaimas, and at Presidio Viejo; and the former, or at any rate the Seri, were once more "annihilated" ("reducidos a nulidad"). Nevertheless, the hydra-headed tribe retained enough vitality in 1807 to induce Governor Alejo Gàrcia Conde to send an army of a thousand men to Guaymas, en route to Tiburon, to repeat the extirpation—though the expedition came to naught for international reasons. 175 × [114]

Among the more useful contemporary records is an unpublished manuscript report by Don José Cortez, dated 1799, found in the Force library, translated by Buckingham Smith, and abstracted by Lieutenant A. W. Whipple for the Report of the Pacific Railway Survey. A subsection of this report is devoted to "the Seris, Tiburones, and Tepocas". It runs: [114]

> The *Seri* Indians live towards the coast of Sonora, on the famous Cerro Prieto, and in its immediate neighborhood. They are cruel and sanguinary, and at one time formed a numerous band, which committed many excesses in that rich province. With their poisoned shafts they took the lives of many thousand inhabitants, and rendered unavailing the expedition that was set on foot against them from Mexico. At this time they are reduced to a small number; have, on many occasions, been successfully encountered by our troops; and are kept within bounds by the vigilance of the three posts (*presidios*) established for the purpose. None of their customs approach, at all, to those of civilization; and their notions of religion and marriage exist under barbarous forms, such as have before been described in treating of the most savage nations. The *Tiburos* and *Tepocas* Indians are a more numerous tribe, and worthy of greater consideration than the Seris, but their bloodthirsty disposition and their customs are the same. They ordinarily live on the island of Tiburon, which is connected with the coast of Sonora by a narrow inundated isthmus, over which they pass by swimming when the tide is up, and when it is down, by wading, as the water then only reaches to the waist, or not so high. They come onto the continent, over which they make their incursions, and, after the commission of robberies, they return to the island; on which account no punishment usually follows their temerity. It is now twenty-three or twenty-four years since the plan was approved by His Majesty, and ordered to be carried out, of destroying them on their island; but, until the present season, no movement has been made to

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[1] Noticias Estadísticas del Estado de Sonora; Mexico, 1850, p. 124 et seq. [113]

[2] Ibid., p. 122.

[3] Bancroft, op. cit., vol. II, p. 682. It is incredible that such a confederation of so incongruous elements could ever have been effected; it is incomparably more probable that there was a succession of outbreaks of the Seri, Piato, and Apache, each stimulated by the removal of soldiers for defense against the other enemies, just as Seri outrages follow Yaqui outbreaks today; but it was undoubtedly a custom of the times (a custom still existing) to connect the several enemies in current thought and speech. [114]

+175 put it into execution. To this end the troops of Sonora are being equipped; a corvette of the department of San Blas aids in the expedition and two or three vessels of troops from the companies stationed at the port of that name on the South sea.[1]

[114] The record is significant as voicing an ill-founded discrimination of the wandering Seri from the inhabitants of Tiburon, as echoing persistent conception of Tiburon as a peninsula, and as summarizing the characteristics of the tribe recognized at the end of the last century.

Meantime population and industries increased, while civil and military development pursued its course; the Presidio of Pitic expanded into a pueblo, and later into the city which gradually adopted the cognomen of General José Maria Gonzalez Hermosillo, a hero of Sonora in the stirring times of 1810-1812; Pueblo Seri became Mexicanized, retaining only a few Seri families in 1811, according to Manuel Cabrera;[2] Guaymas grew into a port of some commercial note; pearl fishing progressed along the coast and prospecting in the interior; despite constant harrying by Seri raids, the rancho of Bacuachito (probably the Bacoachizo of Escudero[3]) became a flourishing pueblo; and plans for ports in the northern gulf were broached and even tested. Moreover, the dawn of the nineteenth century stirred scientific interest in the native tribes, including the obstinate owners of Tiburon—an interest stimulated by Humboldt's American journeys of 1803.

114 +175 Combining earlier cartography (originating with Kino) and persistent tradition up to the beginning of the nineteenth century, Humboldt mapped "Isla de Tiburon" nearly a degree too far northward, and separated from the mainland by a greatly exaggerated strait. The land portion of the map is strikingly defective, revealing in numerous imaginary mesas the author's penchant for Mexican plateaus, while "Rio Hiaqui" ("de Yaqui ou de Sonora" in the text) is combined with Rio Sonora and given an intermediate position, and "Rio de la Ascencion" (Rio San Ignacio) is represented as passing through an estuary into the gulf just off the northern end of Tiburon; the "Indiens Seris" being located on a figmentary mesa north of the latter river and due west of Caborca, Pitic (apparently a composite of San Diego de Pitic, or modern Pitiquito, with San Pedro de Pitic, or modern Hermosillo), and Altar.[4] His text corresponds:

> +175 On the right bank of Rio de la Ascencion live some very bellicose Indians, the Seris, to whom many Mexican savants ascribe an Asiatic origin by reason of the analogy offered by their name with that of the Seri located by the ancient geographers at the base of the Ottorocorras mountains.[5]

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113 [1] Reports of Explorations and Surveys to ascertain the most practicable and economical Route for a Railroad from the Mississippi River to the Pacific Ocean, vol. III, part 3: Report upon the Indian Tribes, 1856, pp. 122-123. The original Cortez manuscript is now in the Library of Congress.

[2] In Velasco, op. cit., p. 137.

[3] Noticias Estadisticas de Sonora y Sinaloa, Compiladas y Amplificadas para la Comision de Estadistica Militar, por el Lic. D. José Agustin de Escudero; Mexico, 1849, p. 68.

[4] Atlas Géographique et Physique du Royaume de la Nouvelle-Espagne, par Al. de Humboldt; Paris, 1811, carte générale.

[5] Voyage de Humboldt et Bonpland, troisième partie: Essai Politique sur le Royaume de la Nouvelle-Espagne, tome I; Paris, 1811, pp. 286-287.

Naturally most of the scientific inquiries of the time were, like those of Humboldt, based on tradition rather than on direct observation.

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Toward the end of the first third of the century an important contribution to actual knowledge of Seriland and the Seri at last grew out of the pearl industry. In May, 1825, Lieutenant R. W. H. Hardy, R. N., was commissioned by the "General Pearl and Coral Fishery Association of London" to investigate the pearl fisheries of the Californian gulf; and his task was performed with promptness and energy. On February 13, 1826, he visited Pitic (under Hermosillo):

> Half a league short [south] of it is another small place, called the Pueblo de los Céres, inhabited by a squalid race of Indians who are said to indulge in constant habits of intemperance and to have lost the fire of the warrior. In its stead they manifest the sullen stupidity peculiar to those who, feeling themselves unfitted for companionship, strive to vent their pusillanimous rage upon objects the most helpless and unoffending, such as women, children, and dogs, who appear to be the chief victims of their revenge.[1]

His chief object in visiting Pitic was to obtain information concerning Tiburon, its natives, and its pearl-oyster beds; and he was rewarded with characteristic accounts of the ferocity of the tribesmen and their use of poisoned arrows, which he received with some incredulity.[2]

After examining the principal pearl fisheries of the western coast, Lieutenant Hardy reached the "Sal si Puedes" in the throat of the gulf, and, on August 9, "got aslant of wind, which carried us up to the northwest end of Tiburow island"[3]—i. e., apparently over the precise route sailed by Padre Ugarte in 1721. Anchoring on the island, he had the good fortune first to meet a native able to speak Spanish, and later to successfully treat the sick wife of the principal chief, after which he was treated with great consideration, and—unwittingly on his part—adopted into the tribe as a member of the chief clan by the ceremony of face painting, the symbol being that of the turtle totem, to judge from the superficial description. Taking slightly brackish water, just as Ugarte had done one hundred and five years before, and arming his crew, he spent the night near the rancheria (evidently in Bahia Agua Dulce). Next morning he "traveled over the greater part of the island" (!) in fruitless search for pearls and gold, and in the afternoon "got under weigh, and stood into a bay of the continent to the northeast of the island," discovering and naming "Sargent's Point", together with "Cockle Harbour", and "Bruja's bay" in the lee of the point, and also "Arnold's Island"; this island being apparently the present prominent cuspof Punta Sargent, now connected with the mainland by a continuous wave-built bar rising a little way above reach of tide. Anchoring in the bay named from his vessel (*La Bruja*), he examined the adjacent shore, ascertaining that "there is no fresh water near the spot, except

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[1] Travels in the Interior of Mexico in 1825, 1826, 1827, and 1828; London, 1829, p. 98.
[2] Ibid., p. 107.
[3] Ibid., p. 288.

X175 during the rainy season, which only lasts about a month or six weeks", nor "any vestige of Indians to be seen except a solitary hut erected by the Tiburons to serve them when they go there to fish"; and, noting the report that Padre Kino had visited this point, he quite appositely questioned the truth of the tradition, partly on the ground of the absence of fresh water, partly because "the Tepoca Indian establishment" mentioned in the tradition "is many leagues farther to the northward." Awakened by an approaching storm, he was under way next morning at daylight, and, getting out of the "bad holding ground", was caught by a gale and carried back to his "old anchorage in Freshwater Bay", where he found the Indians rejoicing over the success of a ceremonial incantation to which they ascribed his return. The reconnaissance map ●[114] is ill-drawn, locating "Fresh Water B." on the mainland side and apparently combining "Sargent's Point" and "Arnold's Island" as "Sargents I."; "San Miguel Pt." is properly located, and idealized route lines traverse the "Canal peligroso de San Miguel" (El Infiernillo), which is of greatly exaggerated width. The careful itinerary shows, however, that Hardy scarcely entered this strait, and made but three or four anchorages in the vicinity—i. e., in Bahia Agua Dulce, in Bahia Bruja, probably in Cockle harbor (or "Cochla Inlet"), and finally off Isla Patos.

[114] Hardy's notes on the Indians are first hand, and hence of exceptional value. He says:

> 105 X175 The Indians on the island of Tiburon are very stout, tall, and well-built fellows, exceedingly like the Twelchii tribe of Indians in Patagonia, and with a language so like theirs that I imagined I was transported back into those wild regions. They by no means look so ferocious as they are represented, and there is something peculiarly mild in the countenances of the females. Their dress is a sort of blanket, extending from the hips to the knees. But most of the old women have this part of the body covered with the skins of the eagle, having the feathers turned *towards the flesh*. The upper part of the body is entirely exposed, and their hair is dressed on the top of the head in a knot which greatly sets off the effect of their painted faces. The men use bows and stone-pointed arrows; but whether they are poisoned I do not know. They use likewise a sort of wooden mallet called Macána, for close quarters in war. They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5 degrees. The insides of these two points, which are 6 inches long, are jagged; so that when the body of a fish is forced between them it can not get away on account of the teeth.[1]

He saw "about fifteen or twenty canoes made of three long bamboo bundles fastened together", and observed that, when engaged in turtle fishing, the Indian "paddles himself from the shore on one of these by means of a long elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn called mesquite, growing near the coast", this pole serving also as a harpoon shaft, provided with a harpoon head and cord, such as those still in use. Respecting the invocatory appurtenances, he says:

> My attention was directed by the old women to a pile of bushes outside the hut, which had a staff of about 5 feet in length sticking up through the center. From

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[1] Op. cit., p. [illegible].

X 175 traversed the Californias and entered Sonora, and while he failed to see Seriland, he made a note on the tribe, valuable as a current estimate of the population:

> At the gates of the city of Hermosillo is established a Mission which contains 500 Seri Indians; 1,000 of them inhabit the coast to the north of Guaymas and Île de Requin (Isla del Tiburon).[1]

The next noteworthy eepisode in the external history of the Seri chronicled in the civil records of Sonora culminated in 1844. "The above-named Seris, although their number never became important, did not abandon their propensity to revolt, and, while they never rose en masse, made many factional uprisings. Ultimately . . . they displayed such boldness, robbing ranchos, assassinating all they encountered, assaulting on the roads arrieros and other travelers", that a considerable force was sent against them from Hermosillo under the direction of Captain Victor Araiza. It was planned to support this land force by a sea party from Guaymas, but delays and misunderstandings caused the practical abandonment of the plan. Tiring of the delay, Araiza "declared war on the Indians, surprising them on Punta del Carrizal, killing 11, including several innocent women and children", and taking 4 captives of from 1 to 11 years in age; whereupon the army returned to Hermosillo.[2]

Disapproving of this undignified and inhuman crusade, the acting governor, General Francisco Ponce de Leon, planned a still more vigorous campaign by land and sea for the purpose of capturing the entire tribe and transporting them to Pueblo Seri, where a few of their kin were still harbored.[3] The command was intrusted to Colonel Francisco Andrade, who took personal charge of the land force, including 160 infantry from Guaymas, 60 infantry and 30 cavalry from Hermosillo, and considerable corps from Horcasitas and Altar. The naval auxiliary, in charge of Don Tomás Espence,[4] pilot, comprised a schooner of 12 tons; two launches, one carrying a 4-pound cannon and the other a 2-pound falconet; and one rowboat. On August 11, 1844, Espence sailed from Guaymas, and six days later cast anchor at the embarcadero (apparently a convenient place on the coast of Bahia Kino due west of Pozo Escalante—the Embarcadero Andrade of figure 1) opposite Tiburon. Andrade marched from Hermosillo August 13,

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113 [1] Exploration du Territoire de l'Orégon, des Californies et de la Mer Vermeille, exécutée pendant les années 1840, 1841 et 1842, tome I; Paris, 1844, p. 214.

[114] [2] Velasco, Noticias Estadisticas, pp. 124, 125. This chronicle is rendered peculiarly valuable by supplements in the form of Andrade's and Espence's journals, the latter incorporated (p. 129) after Velasco's own writing was completed. The whole was revised, extended, and republished in the several volumes of the first series of Bol. Soc. Mex. Geog. y Estad., 1861–1869.

[3] On August 14, 1844, Secretary Manuel Cabrera reported that "there are in this pueblo not more than fifteen families of Ceris located within its borders, maintaining themselves by the manufacture of earthen ollas and by the garbage of their neighbors, i. e., in time of harvest they glean the wheat and corn left scattered, and the bones, entrails, and hoofs of the stock slaughtered for consumption by the inhabitants." (Incorporated in Velasco, op. cit., p. 126.)

[4] Thomas Spence, of Guaymas; apparently the "Mr. Spence" mentioned favorably by Hardy (Travels, p. 96).

X175 immediately burned), as well as bones and other remains of horses.[1] On August 28 and 29 Espence skirted the abrupt and rocky coasts of Tiburon, west and south of the northern bay, without seeing trace of natives; on the 30th he reached the western bay, where he found huts and fresh tracks, and captured a woman disabled by snake-bite. Farther down the bay he encountered a considerable party, who first prepared to attack, and then, overawed by his bold front, sued for peace; whereupon he accepted their submission, and sent them with a letter to Colonel Andrade. This affair concluded, and escaping currents so contrary that he was nearly locoed ("por las corrientes encontradas que me volvian loco"),[2] he coasted southward; and on September 1, at the southwestern point of the island, he found another rancheria, and made peaceful conquest of the occupants, whom he also sent with a letter to Andrade. Thence he coasted eastward, and, on September 3, returned to his starting point, "having navigated the island in the period of nine days, having in this time burned 64 huts and 97 balsas, and reduced to peace 104 Indians with their families." The next day he transported the captives to the mainland, "their number, comprising men, women, and children, reaching 384, besides about 37 remaining at large on the island."[3] On September 5 the remaining troops were transferred to the mainland, with the exception of a small detachment, which remained for an unspecified, but evidently short period, in the vain hope of corraling the warriors, with the families to which they belonged, supposed (on grounds not given) to remain on the island. The troops and their captives immediately moved to Laguna de los Cerceditos (probably Laguna la Cruz) to rejoin the cavalry guard; thence, suffering much from thirst, they marched toward Hermosillo, arriving at that place September 12,[4] where the troops and captives formed a triumphal procession, met on the highroad by the merchants and the civil and military authorities, and greeted by the ringing of bells and the firing of rockets, and with music and refreshments.

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[114]
[224]

[1] The expressions of the journal indicate that Espence was not familiar with the Seri custom of eviscerating and quartering stolen stock, consuming the entrails at once, and transporting the more substantial pieces across the strait on their balsas. Velasco fell into still further error in assuming that the expressions relate to tracks and other indications of the presence of living stock on the island.

[2] Velasco, op. cit., p. 168.

[3] Ibid., p. 169. On the same page Espence classifies the captives as 6 oldsters ("viejos de sesenta años arriba"), 12 beldames ("viejas de cuarenta arriba"), 1 blind, 1 idiotic boy, 5 cripples male, 1 cripple female, 130 women, 160 children, and 144 men—510 in all. Andrade's report enumerates the captives as 120 in each of two lots, with 20 or more in a third, making 260 odd (Ibid., p. 180); while Velasco put the number at 200 and odd ("doscientas y tantas personas"), men, women, and children, including only 20 odd oldsters and warriors combined. The discrepancies are characteristic, and of a piece with those prevailing in the same latitude and longitude today; e. g., Velasco says there are but four waters on the island, Espence says there are eight or ten, and Andrade implies that there are many; Velasco says there were 160 troops from Guaymas, while Andrade mentions only 80; Espence says that in transporting the stock (as noted above) but one mule was drowned by the strength of the current, while Andrade says that a mule and a steer were lost on account of the bad storm which prevailed during the day; yet there is such agreement between dates and facts in the independent journals of Andrade and Espence as to establish general verity despite the provincial weakness concerning details.

[4] According to Andrade (Ibid., p. 182); Velasco says September 16 (Ibid., p. 126).

Leon and executed by Colonel Andrade. Yet it is not uncharacteristic 175ᵗ
of Sonoran history that the wave of anti-Seri activity culminating in 1844 hardly outlasted its own breaking; certainly Escudero, writing less than five years later, declared of "la nacion *Seri*": "During thirty-three years they have committed not a single act of hostility and live in peace and perfect harmony with the Sonorenses." He added that they occupied the islands of Tiburon and Tepoca (sic) and the coasts of the gulf contiguous to Sonora and California, and from the most remote antiquity had been known by the names of "*tiburones*" or "*seris*". Describing Pueblo Seri, he observed: "It now contains hardly a dozen aged Seris of both sexes"; and he forecast the early extinction of the tribe, since the people were incapable of abandoning their independent and solitary existence.[1]

Here ends, practically, the history of Pueblo Seri as a Seri settlement, for, although one of the tribe survived for half a century and a few others may have survived for a decade, the "aged Seris of both sexes" melted away so rapidly as to leave no later record, and were apparently never replaced by others. Briefly, the history of the pueblo began with the establishment of a presidio or military post in 1741 in the natural gateway and watering-place leading into the settled valleys of the Opodepe and upper Sonora, for the sole purpose of protecting the settlements against the wandering Seri, who used this typical Sonora watergap as a way-station on forays but never as a place of residence. The history grew definite when the Jesuits obtained the allotment of lands for the Seri and established for them a mission, which was at the same time a place of catechizing for Seri neophytes, a place of detention for Seri captives, a place of refuge for Seri weaklings, and a place of resort for Seri sneaks and spies. The history proceeded with many vicissitudes, as the presidio was alternately abandoned under Seri attacks and reoccupied when the attacks were repulsed, and as the neophytes alternately escaped and suffered recapture; the formal history waned in relative importance as the population and interests of Pitic and afterward of Hermosillo waxed, and as the lands originally allotted to the Seri were gradually taken and held by Mexican settlers, and ended when the Seri tenure was formally extinguished in 1844, as described by Cabrera and Velasco; and the general history dropped into unimportance with the escape of Andrade's captives, after temporary quartering on the legally established landholders and householders of the Mexicanized pueblo. For a century
and a half the name of the pueblo has continually raised and renewed [114]
the assumption that it marks a site of aboriginal Seri habitation or has played some other leading rôle in Seri history, and this assumption has shaped opinion past and present; yet its error is clearly shown by scrutiny of the historical records, as well as by collateral ethnologic and archeologic evidence.

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[1] Noticias Estadisticas, pp. 141-142.

Here may be said to end, too, the local chronicles of the Seri; for
114 although the state archives are crowded with charges, petitions, com-
+175 missions, reports, and other papers pertaining to the irrepressible Seri; although these materials have overflowed to Ciudad, Mexico, and even to Washington, in official documents both numerous and voluminous; although Dávila in 1894 increased Velasco's forty Seri wars to fifty; and although the weightiest events in the internal history of the Seri have occurred since 1844, little attempt has latterly been made to reduce the abundant data to print.

The Mexican geographic knowledge of the time was surprisingly vague, as is shown by the current maps, for example, the Tanner maps which appeared in several editions: the 1846 edition recalls and evidently reflects the Humboldt map of the beginning of the century; "R. Ascencion" is represented as embouching through an estuary about 30° 20′, with the "Seris Indians" north of its lower half-length and west of "Pitic" and "Ft. del Alter"; Ures is located 3 or 4 miles southeast of this fort, and "Racuach" (the Bacuachito of the present) is 20 miles farther southeastward. Neither Rio Sonora nor any of its important branches are indicated, while "Pitic" is placed several times too far from the coast and from Guaymas, in a featureless expanse of paper; "Rio Hiaqui" is shown as a branchless and conventional stream of a single crescentic curvature, embouching in about the right latitude. The coast of the gulf is distorted, and "Tiburon" is shown as an island much too large and nearly a degree too far north, separated from the mainland by a greatly exaggerated strait, with an elongated mesa ("Mt. del Picu") skirting the mainland coast—in short, the cartography is largely traditional if not fanciful.[1]

The career of the Seri during the half century 1844–1894 is traceable by aid of (1) unpublished documents, (2) published results of scientific inquiries and surveys, and (3) personal reminiscences of men living on the Seri frontier; but in a summary touching only salient points the first-named source may be passed over.

One of the first foreign visitors to follow Baron Humboldt in systematic inquiries concerning the aborigines of northwestern Mexico was Henri Ternaux-Compans; his information, too, was secondhand and remote, yet he correctly recognized Isla Tiburon as "inhabited by the Seris, who have some huts also on the mainland".[2]

Later came Eduard Mühlenpfordt, an attaché of a German commercial company and later a Mexican state official, who traveled extensively and wrote partly at first hand, though there is little indication of personal acquaintance with Seriland or the Seri: he described "Bahia de San

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[113] [1] A Map of the United States of Mexico, as organized and defined by the several Acts of the Congress of that Republic, constructed from a great variety of Printed and Manuscript Documents, by H. S. Tanner. Third edition, 1846. The map in De Mofras (op. cit., atlas) is little better.

[2] Nouvelles Annales des Voyages, tome III, 1842, p. 329 (cited by Buschmann, Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden, in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band; Berlin, 1859, p. 258).

Juan Bautista", with "the small island San Augustin" lying before it 114
(in such manner as to identify this islet with Isla Tassne), and located
"the large island Tiburon farther northward, opposite a mountainous 175X
coast".[1] He added:

> The waterless but cattle-stocked plains between the place Pitic and the coast, and thence up to the river Ascension, are inhabited by a meager remnant of the Seri tribe, while on Tiburon island, opposite this coast, the Tiburones dwell. The Seris were formerly very numerous, by far the fiercest of all the Indian tribes of northern Mexico, and very warlike. Through ceaseless war with the Tiburones and the troops from the Spanish presidios they are now nearly extinct.[1]

Elsewhere the Tiburones were characterized as enemies of the Seri,[2] while the "Heris" tribe was enumerated as a branch of the "Pimas Bajas" people. Herr Mühlenpfordt's characterization of the Seri and the Tiburon islanders as enemies would appear to be groundless, yet not wholly incomprehensible; in the first place, the earlier literature indicates that the term Seri (Seris, Ceris, Heris, etc.) was an alien designation of lax application,[4] doubtless extended occasionally or habitually to marauding nomads, regardless of affinity; again there is conclusive evidence that in many instances Seri convert-captives attached to the missions and pueblos were often regarded as tribal apostates and outlaws whose lives were forfeit; and, moreover, the region in which Herr Mühlenpfordt gained his information was and still is one of abounding tale, whose frequent exaggeration and not infrequent invention conceal and distort the simple facts.

In 1850, Don Diego Lavandera transmitted to the Mexican Society of Geography and Statistics, through the hands of Señor José F. Ramirez, certain documents, accompanied by a note to the effect that "The tribe of the Seris speak Arabic, and it is understood by the Moors at the first interview"—this note merely expressing a prevailing current opinion. Undertaking to test the opinion, Señor Ramirez sent to Lavandera, in Sonora, a number of words in three Arabic dialects, at the same time asking for the Seri equivalents; and the inquiry yielded a Seri vocabulary (probably the first ever printed) of eleven words. Of these none show the slightest affinity with the Arabic dialects; at least four (horse, chamber, population, wine) express concepts alien to the Seri; and only three or four can be identified with Seri terms recorded in later vocabularies. No reference is made to Señor Lavandera's aboriginal informant; but there is a strong presumption that it was the official interpreter at Hermosillo and Pueblo Seri—a presumption

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[1] Versuch einer getreuen Schilderung der Republik Mejico besonders in Beziehung auf Geographie, Ethnographie, und Statistik: Hannover, 1844, Band I, p. 441; Band II, p. 443. [113]

[2] Ibid., Band II, pp. 419-420.

[3] Ibid., Band, I p. 230.

[4] Peñafiel defines "Seris" as the "name of a tribe of Sonora, originating probably in the Opata language" (Nomenclatura Geográfica de México—Etimologías de los Nombres de Lugar . . . por el Dr. Antonio Peñafiel, primera parte, 1897, p. 225); while Pimentel defines two suggestively similar Opata words, "*Seraui*, paso menudo y bueno", and "*Sereái*, velocidad de la persona que corre" (Vocabulario Manual de la Lengua Ópata, Bol. Soc. Mex. Geog. y Estad., tomo X, 1863, p. 308), i. e., a good and direct pace, and the speed of a person running, respectively (cf. postea, p. 125). [101]

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warranted by coincident historical records and statements of contemporaries still living, to the effect (1) that an official interpreter was there then and for a long time later, (2) that neither then nor later were there other Seri representatives able to furnish vocabularies at Hermosillo, Pueblo Seri, or other towns, and (3) that at that time (as at most others) the relations between the Seri and the whites were such as to prevent amicable communication through casual meeting or otherwise.

Proceeding with his discussion, Señor Ramirez sought to correct the allegation of Abbé Hervas that "in the mission of Belen live three nations, called Hiaqui, Seri, and Guaima, who speak *three different languages*." After quoting a Jesuit manuscript of July, 1730, reporting that "the language of the Seris is the same as that of the Guaimas", he added a significant statement contained in a manuscript report from the Bishop of Sonora, directed to Don José de Galvez, under date of September 29, 1784, concerning the mission of Belen: "Two nations of Indians, Pimas Bajos and Guaimas, live united, the latter having abandoned their pueblo under the continuous assaults of the Seris. The Pimas use their own language. . . . The Guaimas use their ancient language." Summarizing the evidence (of course secondhand and derived from the observations and reports of the missionaries), Señor Ramirez held as proved, first, "the existence of two diverse languages at the mission of Belen—that of the Guaimas and that of the Pimas Bajos"; and second, that "the Guaimas and the Seri are the same".[1] It would appear that Señor Ramirez hardly appreciated the significance of the statement of sixty-four years before that the Guayma were still using their "ancient" language, with the implication that they were acquiring familiarity with the Piman tongue—a familiarity that may well have misled later inquirers.

It is just to say that scientific knowledge of the Seri began with the visit to Hermosillo of United States Boundary Commissioner John Russell Bartlett, on December 31, 1851. True, Commissioner Bartlett approached no nearer Seriland than Hermosillo and Guaymas, and saw but a single Seri; yet he obtained an excellent vocabulary and considerable collateral information from this Indian. According to this information—

> +175 The Ceris tribe of Indians, with the exception of those which are christianized and reside in the village near Hermosillo, occupy the island of Tiburon in the Gulf of California, north of Guaymas. Although believed not to number over 100 warriors, they have long been the dread of the Mexicans between Guaymas and Hermosillo, as well as the country to the north, on account of their continual depredations and murders. Their practice is to lie in wait near the traveled roads, and there surprise small and unprotected parties. Their place of abode being on an island or the shores adjacent, and their subsistence being chiefly gained by fishing, they have no desire to steal animals, which would be of no use to them; nor do they take any prisoners. To murder and plunder small parties of Mexicans seems

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[113] [1] Lenguas Primitivas, in Boletin del Instituto Nacional de Geografia y Estadistica de la República Mexicana, third edition, tomo II; Mexico, 1861, pp. 140-149.

to be their only aim, and every arrow or lance thrown by the Ceris that pierces the skin causes death, as all are poisoned. Many expeditions, fitted out at a great expense, have been sent against them; but, though commanded by competent officers, all have failed. The number being so small, they manage when pursued to conceal themselves where they can not be found. The island of Tiburon, as well as the mainland adjacent, is exceedingly barren and destitute of water; hence parties have suffered greatly in the campaigns against them, without accomplishing anything. I was told that the Government had already expended more than $1,000 for every male of the tribe. The last serious attack of these people was made upon a gentleman travelling to Guaymas in his carriage with his family and attendants, embracing 16 persons. They were surprised in an unfrequented place and every soul put to death.[1] 175X

Commissioner Bartlett quoted Hardy's description of the arrow poison, and, speaking of the Seri tongue, added:

> I found it an extremely harsh language, very difficult to express with our letters, and totally different from any aboriginal tongue I had heard spoken; . . . but it was impossible for me, without a close philological comparison with other Indian languages, to arrive at any correct conclusion as to whether this people are allied or not to other aboriginal tribes.

He also referred to a prevalent notion that "the Ceris were of Asiatic origin, in proof of which some statements were made too improbable to repeat. This idea seems to have originated from the resemblance between their name and that given by the ancients to the Chinese."

In order to obtain a Seri vocabulary, Commissioner Bartlett had a messenger dispatched "to a pueblo or village of these Indians near Hermosillo. The person sent for made his appearance in a few hours"; he was "a good-looking man, about 30 years of age. His complexion [115] was fair, and resembled that of an Asiatic rather than an American Indian. His cheek bones were high, and his head round and well formed, though the anterior portion was somewhat angular and prominent. His hair was short, straight, and black. He was a full-blooded Ceris, and came originally from the island of Tiburon. In about three hours I completed the vocabulary quite satisfactorily to myself."[2] The vocabulary was not printed with the narrative; nor were references made to the Seri population, either in the pueblo or in Seriland.

While the vocabulary was not published by Commissioner Bartlett, 114 it was preserved and passed into the hands of George Gibbs, who made a systematic transcript;[3] this came into possession of Dr Albert S. Gatschet, and a copy is preserved in the archives of the Bureau of American Ethnology. The name of the native informant is not recorded, 115 but fortunately he was found still living, and was fully identified, during the expeditions of 1894 and 1895—especially toward the end of the

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[1] Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua, Connected with the United States and Mexican Boundary Commission, during the years 1850, '51, '52, and '53; New York, 1854, vol. I, p. 463 et seq. 113

[2] Ibid., pp. 463-464.

[3] This transcript is entered in a blank schedule Vocabulary of 180 Words, printed by the Smithsonian Institution for Gibbs, with a supplementary sheet; it is dated January 1, 1852; and while the published "Narrative" implies that it was recorded December 31, 1851, the manuscript date is confirmed by the Seri interpreter, Kolusio.

115 latter, when, on January 4, 1896, he was employed as an informant. He was then a fine-looking man of noble stature and figure, and of notably dignified air and manner, dressed in conventional attire; his hair was luxuriant, iron-gray in color, and trimmed in Mexican fashion. His looks indicated an age of about 70, but in his own opinion (which was corroborated by that of Señor Pascual Encinas and other old acquaintances) he was at least 75. His movements were vigorous, his eyes clear and bright, his vision good, and, except for hardly perceptible imperfection of hearing, he was in full possession of normal faculties. He was in the employ of the state as a trustworthy attaché of the governor's palacio, where his services were nominal; his real function was that of a Seri interpreter in case of need; and on the day specified he was temporarily assigned to the service of the expedition by His Excellency Governor Corral. By Mexican acquaintances he was commonly called Fernando, though he called himself Kolusio, sometimes using the former designation as a forename; he was also known as "El General" (= Chief), or "El General de los Seris". He had a vague memory of Tiburon island, which he left in childhood (at about 6 years of age, according to his estimate) and had never revisited, though he had been on the Seri border so late as 1870. Except when temporarily at Rancho San Francisco de Costa Rica, he had lived in Pueblo Seri, usually reporting in Hermosillo daily for such duty as might be assigned to him at the palacio. He was aware that he was regarded as a tribal outlaw, and admitted that no consideration could induce him to approach Seriland, since he would be slain by his tribesmen more eagerly than any alien; indeed, he hardly dared venture so far westward as Molino del Encinas, in the outskirts of Hermosillo, and only did so in daylight or in company of others. His few kinsfolk in Pueblo Seri had died or deserted so long before that he had forgotten names and dates; and, as he remarked with half-realized pathos, he had been alone amid aliens for very many years ("muy muchos años"). The linguistic inquiries put to him reminded him of previous interrogations of the
114 sort, and he voluntarily described the visit of a distinguished American
115 who, a long time ago (more than 40 years, he thought), came down from Ures, with many books and papers, and spent New Year's day in
175 interrogating him about his language and his people. He was much impressed with the ability displayed by the "Gringo muy grande" in writing the terms and afterward repronouncing them properly; and he described the visitor as appearing very pale and sick ("muy palido y malo"), and under the necessity of frequently resting and taking medicine, and also as having wavy hair, worn so long as to hang down over the neck and shoulders. He could not recall that he had ever heard the American's name; but his description pointed clearly to Commissioner Bartlett, who had risen from a sick-bed at Ures and was on his way to Guaymas to get the benefit of a sea voyage, and who wore his hair long during a part or all of his expedition (as was subsequently

ascertained by extended inquiry). Kolusio also remembered "giving his language" (a bold if not sacrilegious act, according to his view) to two or three other persons, (one "not a Mexicano" though speaking Spanish, none "Americano"[1]); but the first-mentioned instance was the one most deeply impressed on his mind. At this time (1896) he retained a working knowledge of the Seri tongue, and was able to serve satisfactorily as a Spanish-Seri interpreter; yet careful test showed that he had forgotten numerous native terms, and sometimes inadvertently substituted other Indian (Yaqui, Papago, and probably Opata) and Spanish words; while he knew so little of the tribal customs and beliefs that inquiries pertaining to them were too nearly fruitless to be long pursued. Undoubtedly his knowledge of the Seri tongue was fresher and fuller in 1852; but since he was practically isolated from his tribe in early childhood, he probably never possessed much information concerning the esoteric characters of his people. 115 114 175

The next noteworthy scientific student of the Seri was Johann Carl Eduard Buschmann, who visited various Mexican tribes, but whose knowledge of the Seri was wholly secondhand. Quoting Villa-Señor and Arrecivita and other early writers, noting unfortunate passages from Bartlett, and magnifying Mühlenpfordt's misapprehensions into positive error, he reduced knowledge of this and neighboring tribes to chaos. The "Guaymas" were separated from the "Seris (oder Seres)", and these (at least by implication) from the "Tiburones", while the "Pimas" were combined with the Seri, the traditional alliance with the Apache was greatly overdrawn, and the "Heri oder Heris" and the "Tepocas" were treated as distinct.[2] No new facts were adduced, no use was made of local sources of information, and no notice was taken of other than literary data. 114 175

In 1857 the gigantic surveying enterprise of Jecker & Co. was undertaken, under a concession from the Government of Mexico, and the scientific surveys were intrusted to a commission headed by El Capitan Carlos Stone (General Charles Pomeroy Stone, U.S.A.). The commission headquartered at Guaymas, purchased vessels for the survey of the coast, and began operations also in the interior; Bahia Pinacati and George island (named by Hardy in 1826) were surveyed, as well as the entire Sonoran coast south of Guaymas, and "one hundred miles of coast near Tiburon", besides many hundred square miles of valuable lands. At this stage friction developed between the progressive commission and the conservative Sonorenses, which ended in the expulsion of the scientific commission by the State government.[3] By reason of the 175

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[1] At the time of inquiry the importance of the other vocabularies was not suspected, and the interrogation was not pushed far enough to permit identification of the persons to whom they were given. 124

[2] Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden. Zugleich eine Musterung der Völker und Sprachen des nördlichen Mexicos und der Westseite Nordamerikas von Guadalaxara an bis zum Eismeer. Von Joh. Carl Ed. Buschmann (in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band); Berlin, 1859, pp. 218-221 and elsewhere. 113

[3] Arizona and Sonora, etc., by Sylvester Mowry; New York, 1864 pp. 98-102.

+175 premature termination of the work, few of the observations and other results were ever published. General Stone himself traveled extensively in Sonora, and delved deeply in the historical records of northern [114] Mexico; and, while there is no indication that he ever came in personal contact with the Seri, he collected and sifted current local information relating to the tribe with notable acumen. In certain "Notes" prepared in Washington in December, 1860, he wrote:

> 105 The *Ceris* are a peculiar tribe of Indians occupying the island of Tiburon and the neighboring coast. They are yet in a perfectly savage state, and live solely by +175 fishing and hunting. Having been at war with the whites from the time of the first missions, they have become reduced in numbers to about 300, counting some 80 warriors. They are of large stature, well made, and athletic. In war and in the chase they make use of poisoned arrows, the wounds from which are almost always fatal. In preparing the poison, it is said they procure the liver of a deer or cow, and by irritating rattlesnakes and scorpions with it, cause it to be struck by a great many of these reptiles. They then hang up the mass to putrefy in a bag, and in the drippings of this bag they soak their arrowheads. I can not vouch for the truth of this statement, but it is current in Sonora. I was informed by a gentleman in Hermosillo that one of his servants, who was slightly shot by a Ceri's arrow, died quickly from the effect of the wound (which mortified almost immediately) in spite of the best medical treatment. Their language is guttural, and very different from any other Indian idiom in Sonora. It is said that on one occasion some of these Indians passed by a shop in Guaymas, where some Welsh sailors were talking, and on hearing the Welsh language spoken, stopped, listened, and appeared much interested, declaring that those white men were their brothers, for they had a tongue like their own. They are very filthy in their habits, and are said to be worshipers of the moon.[1]

+175 Another Mexican traveler of note who collected local and contemporary information concerning the Seri, though enjoying no more than slight inimical contact with them, was Herr Clemens A. Pajeken, of Bremen (for some time a resident of California). He classed as wild Indians ("Wilde Indianer, Indios broncos") the Seri and Apache tribes. Of the former he wrote:

> 105 Ceris. This is a small tribe, their number not exceeding 400 souls, or rather head [deren Seelenzahl oder besser Kopfzahl]; yet the government of the State could +175 not restrain this little band of robbers and marauders that for more than twenty years have perpetrated their atrocities on travelers between the port of Guaymas and the city of Hermosillo, the metropolis of the State. . . . The Ceris appear not to grasp the idea that they are human. Like the prey-beasts of the wilderness, they go out to slay men and animals, sparing only their own kind. In many respects they are viler than the beasts, since they slay without need merely to satisfy a lust for slaughter. They are not only the stupidest and laziest of the Indians of Sonora, but also the most treacherous and deceitful. During the Spanish rule, from the time the first visit was made to lead them toward social life, they have rebelled more than forty times. Only a couple of families [ein paar Familien] still reside in the village [Pueblo Seri], where they make ollas and subsist on the offal of the shambles. The proper home of these barbarians is the island of Tiburon and the adjacent coasts, whither they return after their outbreaks, although it is an incredibly desert region. Thence they repair to the highways to kill travelers and arri-

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[113] [1] Notes on the State of Sonora, by Charles P. Stone, 1860; Washington, 1861, p. 19. Reprinted in [illegible]storical Magazine, vol. v, 1861, pp. 161-169.

> ocas, or to the ranges to steal cattle. They confine themselves to the bow and arrow, and the latter are poisoned, so that every wound made by them is deadly, or at least highly dangerous. On my second journey into the interior of the country my horse received an arrow in the hip; the arrow, which entered 4 inches, could not be withdrawn until the following day; and for seven months the wound suppurated. . . . Their chief food consists of oysters, mussels, snakes, with fish and other sea food, which they consume entirely raw and which surrounds them with an intolerable stench; though this may be partly due to their exceeding uncleanliness, since the process of washing is wholly unknown to them. Their clothing consists of a kilt of pelican skin. They tattoo their faces, and some pierce their noses to insert a certain green stone [obsidian]. They are of dark copper color, large and strongly built. Although in their faces no human sentiments can be discerned, yet they can not be called ugly. Their limbs are so beautifully proportioned that the Spanish ladies in Hermosillo view with envy the slender shapes and the comely hands and feet of the young Ceris maidens. They wear no headdresses, and as their coarse, shaggy hair is neither combed nor cleaned, it sticks out in tangled tufts in all directions like spines on a hedgehog; this alone gives them a forbidding appearance. Their speech is quite like their character; it is guttural, discordant, and meager, resembling more the howling of wild animals than human speech, wherefore it is difficult for a human to learn. They have no religion—at least, I do not deem the gambols and amusing capers in which they indulge at the new moon to be religious customs. The tribe is constantly diminishing in numbers, and it is hoped they may soon disappear from the earth by natural decrease—unless the State government sooner undertakes a war of extermination.[1]

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Herr Pajeken's record bears inherent evidence (at least to one familiar with the region) of reflecting the current local knowledge and opinion concerning the Seri with unsurpassed—indeed unequaled—fidelity; and it is also of value in that it indicates the approximate number of the tribe then surviving in Pueblo Seri, and in that it gives the contemporary estimate of the tribal population.

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Among the more careful students of the Seri at second hand should be mentioned Buckingham Smith, an enthusiastic collector, translator, and publisher of rare Americana. In the introduction to an anonymous and dateless grammar of the Heve language he wrote in 1861:

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> The lower Pima are in the west of the province [of Sonora], having many towns extending to the frontier of the indomitable Seri, who live some 20 leagues to the north of the mouth of the Hiaqui, and have their farthest limit inland some dozen leagues from the sea, finding shelter among the ridges and in the neighboring island of Tiburon.

He added in a note:

> The Guaimas speak nearly the same language as the Seri, are few in number, and live among the Hiaqui in Belen and elsewhere, having retreated before the sanguinary fury of their conquerors.[2]

While the scientific knowledge of the Seri began with Bartlett's visit, it assumed definite shape only through the classic researches of Don Francisco Pimentel (Count Herras) in the early sixties. His analysis and classification of the Seri tongue rest on a short vocabulary

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[1] Reise-Erinnerungen und Abenteuer aus der neuen Welt in ethnographischen Bildern, von C. A. Pajeken; Bremen, 1861, pp. 97-99.

[2] A Grammatical Sketch of the Heve Language, translated from an unpublished Spanish manuscript; in Library of American Linguistics, vol. III, New York, 1861, p. 7.

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+175 [114] collected by Señor D. A. Tenochio and transmitted to the Mexican Society of Geography and Statistics. Noting the condition of the tribe at the time, Señor Pimentel wrote:

> The Seris are now reduced to a *few* families only, inhabiting Sonora, especially the island of Tiburon, for which reason they are also known sometimes by the name Tiburones. The Indians called Salineros, who live on the borders of Pimeria Alta, and the Tepocas, who live toward the south, belong to the Seri nation. The Seris have always been notable for their ferocity and barbarism, preferring death in war against the whites to the adoption of civilization. They are dreaded and notorious for their arrows, poisoned with a most virulent venom [emponzoñadas con activisimo veneno]. They are tall and well formed, and their women are good-looking. By reason of their distrust of the whites, it has not been possible to ascertain their traditions, further than that their ancestors came from distant lands of unknown direction. Of their religion it is known that they adore daily the rising sun.[1]

After brief discussion of the grammar, and extended comparison of some sixty out of the seventy vocables selected by Señor Tenochio, he concluded:

> [197] Although in the list of Seri words consulted the foregoing reveal analogies with those of the Mexican group, there are, without doubt, other terms belonging exclusively to the Seri or some other branch extraneous to the Mexican group; for this reason it would appear that the idiom represents a distinct *family*.[2]

The list of these distinct words was appended. Referring to the dialects, Señor Pimentel expressed the opinion, based on literary references, that the "Guayma" or "Gayama", "Upanguaima", and "Cocomaques" may be considered as belonging to the Seri family.[3]

While Señor Pimentel gave credit to his informant, Señor Tenochio, 115 he did not indicate the original source of the vocabulary; but the +175 source may be defined approximately by a process of elimination: there is hardly a possibility that the terms were obtained from any tribesmen in Seriland, since they were all inimical to the whites, and since very few of them have ever known enough of the Spanish tongue to permit communication with the Mexicans; accordingly, it is practically certain that the Seri interpreter must have been either (1) a resident of Pueblo Seri or (2) an attaché of rancho San Francisco de Costa Rica (of which more anon); and in either case it would seem certain that the native informant could have been none other than the standard Seri-Spanish interpreter of the last half century—Kolusio. Indeed, Kolusio was, at the time, the only Seri habitué of Pueblo Seri possessing sufficient knowledge of the Spanish and enough intelligence and independence to "give his language", and was one of the two frequenters of the rancho similarly equipped.

114 +175 Pimentel's contemporary, Licenciate Manuel Orozco y Berra, contributed in important measure to systematic knowledge of the Seri, which 197

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[1] Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México, ó Tratado de Filología Mexicana, por Francisco Pimentel, segunda edicion única completa, tomo II; Mexico, 1875, p. [illegible]. The first edition of the work was published in two volumes, dated, respectively, 1862 and 1865.

[2] Ibid., p. 561.

[3] Ibid., p. [illegible].

he defined (apparently on the basis of the Tenochio vocabulary systematized and published by Pimentel) as a distinct linguistic family with two dialectic branches,[1] viz: 175 197 [114]

IX FAMILIA.—SÉRI.

XXXIII. *Séri*, por los séris, séris, tiburones, tepocas, salineros, en Sonora.
61. I. *Upanguaima*, por los upanguaimes, en Sonora,
62. II. *Guaima*, por los guaimas, guaymas, gayamas, cocomaques, en Sonora. 131

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima": 175

> The *Séris*, a tribe inhabiting Sonora, forms, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the district which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the islands, as well as of the continent, and it seems not unlikely, although very curious, that they are related to them. The *Séris*, known also as Tiburones, a name derived from the island of Tiburon in the Mar de Cortés, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros. 101 175

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomagues" were combined chiefly on the authority of Jesuit writers.[2] In describing the State of Sonora he further wrote: 175

> The *Séris*, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; south of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Ferocious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.[3] [131] [101]

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[1] Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificación de las Mismas Lenguas y de Apuntes para las Inmigraciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 58. [113]

[2] Ibid., p. 62.

[3] Ibid., pp. 353-354.

X175 114 197 The classifications by Pimentel and Orozco were widely accepted, and were given still wider currency by republication in standard works, such as the classic dictionary of the Nahuatl tongue by Rémi Siméon, in which is defined "La famille *Seri*, dans la Sonora, avec 3 idiomes: le *Seri*, le *Guaima* et l'*Upanguaima*."[1] In his ethnographic tableau of the nations and languages of Mexico, M V. A. Malte-Brun followed Orozco almost literally, save that he emphasized the suggested Caribbean affiliation of the Seri, saying:

> They make use of poisoned arrows, and when one studies their manners, their habits, their modes of life, one is tempted to find in them a strong affinity [grande affinité] with the Caribs of the continent and the islands.[2]

During the seventies Hubert Howe Bancroft was engaged in collecting material for his monumental series of works, and in arranging the ethnologic data for publication. Of the Seri he wrote:

> East of the Opata and Pima bajo, on the shores of the Gulf of California, and thence for some distance inland, and also on the island of Tiburon, the Ceri language with its dialects, the Guayma and Tepoca, is spoken. Few of the words are known, and the excuse given by travelers for not taking vocabularies is, that it was too difficult to catch the sound. It is represented as extremely harsh and guttural in its pronunciation and well suited to the people who speak it, who are described as wild and fierce. It is, so far as known, not related to any of the Mexican linguistic families.[3]

The only vocabulary of this language which Bancroft was able to find was added (without reference to the aboriginal source); it comprised the eleven words collected by Lavandera and discussed by Ramirez in 1850.[4]

114 X175 The Seri, with their affines, the Tepoka, Salinero, Guayma, and Upanguayma, were included by Bancroft in his arbitrarily defined "Northern Mexican family".[5] The accompanying map (which is highly inaccurate) located the "Salineros" on the gulf coast, considerably north of the common embouchure of "R. de Horcasitas" and "Rio de Sonora", while the "Seris" were more conspicuously represented about the broad estuary into which the rivers embouch, and the "Tepocas" were located still farther southward on both Tiburon and the mainland, the island being placed too far southward and the river much too far northward.[6] Numerous data relating to the Seri were incorporated in his text; all were second-hand, though many were taken from unique or rare manuscripts. The coastwise natives of Sonora were said to "live on pulverized rush and straw, with fish caught at sea or in artificial enclosures"; mention was made of the allegation that "the Sali-

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[1] Dictionnaire de la Langue Nahuatl ou Mexicaine, rédigé d'après les Documents imprimés et Manuscrits les plus authentiques et précédé d'une Introduction; Paris, 1885, p. xviii.

[2] Tableau de la Distribution ethnographique des Nations et des Langues au Mexique; Congrès International des Américanistes, Compte-rendu de la Seconde Session, tome II, 1878, p. 37.

[3] The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1882, p. 704). The "east" in this quotation is obviously a misprint for west.

[4] Ibid., p. 705.

[5] Op. cit., vol. I, pp. [illegible].

[6] Ibid., p. 571.

neros sometimes eat their own excrement"; anthropophagy was noted, but as pertaining rather to the interior than to the coastwise tribes;[1] and prominence was given to the Seri arrow poison, of which an early author wrote: 114 175X

> The poison with which they envenom the points of their arrows is the most active that has ever been known here. . . . It has not been possible to ascertain with certainty the deadly materials of which this pestilential compound is brewed. Many things are alleged, e. g., that it is made from the heads of vipers, irritated and decapitated at the moment of striking their teeth into a piece of lung or of half putrefied human flesh.

Reference was made also to the "magot" (probably the yerba mala of the modern Mexicans) as a source of arrow poison.[2] The girls' puberty feast was said to be kept up for several days among the Seri and Tepoka, and the former were said to "superstitiously celebrate the new moon, and bow reverentially to the rising and setting sun", and also to "employ charms in their medical practice".[3] Finally, the constituent tribes were discriminated in a manner recalling the persistent assumption that the parasite-converts at the missions fairly represented the Seri:

> The Tepocas and Tiburones are fierce, cruel, and treacherous, more warlike and courageous than the Ceris of the mainland, who are singularly devoid of good qualities, being sullenly stupid, lazy, inconstant, revengeful, depredating, and much given to intemperance. Their country even has become a refuge for evil doers. In former times they were warlike and brave, but even this quality they have lost, and have become as cowardly as they are cruel.[4]

It is evident that this characterization of "the Ceris of the mainland" was based on the degraded scavengers outlawed by the tribe and attached to the missions and pueblos during much of the historical period.

It was also during the seventies that the errors and uncertainties of three and a half centuries concerning the coasts of the Californian gulf were finally brought to an end through the surveys of Commander (now Admiral) George Dewey, U. S. N., and the officers of the United States ship *Narragansett*, under the direction of the Hydrographic Office of the United States. These surveys resulted in trustworthy and complete geodetic location of all coastwise features, in geographic placement of the entire coast-line, in soundings of such extent as to determine the bottom configuration, in tidal determinations, in recognition of the currents, in definition of harbors and anchorages, and eventually in a series of elegant and accurate charts (dated 1873-75) available for the cartographers and navigators of the world. As the largest island in the gulf, Tiburon received especial attention; its coast was accurately surveyed and mapped, while the interior was sketched in considerable detail, and the adjacent channels were carefully defined and sounded.

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[1] The Works of Hubert Howe Bancroft, vol. [illegible] (The Native Races, vol. [illegible], [illegible], p. [illegible].)

[2] Ibid., p. [illegible].

[3] Ibid., pp. [illegible].

[4] Ibid., p. [illegible].

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

x175 Naturally the surveyors came into contact with the Seri tribesmen. Of them Commander Dewey wrote:

> During the greater part of the year Tiburon Island is resorted to by the Seris (or Ceres) tribe of Indians, who inhabit the adjacent mainland, and their huts and encampments may be seen in many places along the shore, principally on the eastern side of the island. They are reputed to be exceedingly hostile and to use poisoned arrows in opposing the landing of strangers on what they consider their domain, but during the stay of the *Narragansett* in the vicinity they were very friendly. At first they were shy and made threatening gestures, but soon finding that our intentions were peaceable, became friendly and returned our visits to the shore by frequent and lengthy calls on board ship. They are very expert in hunting with the bow and arrow and in catching fish and turtles, which abound in the surrounding waters. The canoes of these Indians deserve especial mention. They [501] are made of long reeds, which are bound together with strings after the manner of fascines, three of which when fastened together . . . have sufficient buoyancy to support one or two persons. They kneel in these canoes when paddling, the water being at the same level in the canoe as outside of it.[1]

114 Illustrations of the "Tiburon canoe" (or balsa), drawn by H. Von Bayer, were also introduced.[2] In addition Mr Von Bayer succeeded in obtaining two photographs of Seri Indians, taken on shipboard; one x175 of these is of special interest in that it illustrates the peculiar attitude of the Seri archer in the act of using his weapon.[3]

Unfortunately the surveys were confined to the coast, and the interior remained unmeasured and unmapped save on the basis of tradition and travelers' tales, supplemented by a few vague itineraries and traverses. Except along the international boundary and the railway (Ferrocarril de Sonora), the locations of pueblos and ranchos remained guesses, the delineation of mountains remained a work of imagination, and even the best cartographers continued to run in rivers at random or in such wise as to afford artistic effect.[4]

In 1879 M Alphonse L. Pinart traveled extensively in northern Mexico and southwestern United States, and made considerable linguistic collections among various tribes. Desiring to obtain a Seri vocabulary, he planned a visit to the tribal territory; but on reaching Caborca in March he was met by the information that the Seri were on the warpath, and had recently devastated a hacienda on their frontier and slain more than a dozen white settlers.[5] Thence he repaired

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[113] [1] Publication No. 56, U. S. Hydrographic Office, Bureau of Navigation. The West Coast of Mexico, from the Boundary Line between the United States and Mexico to Cape Corrientes, including the Gulf of California (revised edition), 1880, p. 143.

[2] Ibid., pl. xv, p. 136 (one of these illustrations is reproduced in figure 29).

[3] The negatives of these pictures were retained by Mr Von Bayer, and have been kindly turned over to the Bureau of American Ethnology. Unfortunately the archery negative had been shattered, but enough of the fragments were preserved to show all essential details and to afford a basis for the drawing reproduced in plate XXIX.

[4] The imposing official map of 1890, titled Carta General de la Republica Mexicana, formada en el Ministerio de Fomento con los datos mas recientes, por disposicion del Secretario del Ramo, General Carlos Pacheco, engraved and printed by Erhard Hermanos, Paris, on a scale of about 32 miles to the inch, represents Rio Bacuache as about the right length and with its center in about the right location, but as running at almost exactly right angles to its actual course; and it contains divers other equally startling errors.

[5] Recorded by Gatschet, Zeitschrift für Ethnologie, Berlin, Band XV, 1883, p. 130. The location of the hacienda was not specified, but there are local traditions of Seri raids about that time, both at Hacienda Serna (between Caborca and Libertad anchorage) and at Bacuachito.

to Pueblo Seri, and early in April obtained there a Seri-Spanish 114 vocabulary of several hundred words, with a number of short phrases throwing some light on the grammatic construction. This record was 175X transmitted to Dr Albert S. Gatschet. It comprises a title page inscribed "Vocabulario de la lengua Séri | Interprete el Gl. de los [113] Seris | y otro Indio. | Pueblo de Seris | 4 Abril 1879"; four foolscap sheets (written on both sides, thus making 16 pages) of vocabulary; and a final page bearing two short phrases and inscribed "Los Séris, me dice el general de ellos, son como doscientos hombres de llevar armas—viven todavia parte en la isla de Tiburon, parte en la costa.[1] Pueblo de Seris, 4 Abril, 1879, Alph. Pinart." A transcript of this invaluable vocabulary is preserved in the Bureau of American Ethnology. There is nothing either in the original vocabulary or in the known correspondence relating to it to identify the aboriginal [115] informant, but the identification is made easy through the coincident testimony of living witnesses and the unmistakable implication of the historical records to the effect that there was at that time but a single Seri Indian[2] resident at Pueblo Seri—i. e., the official interpreter, "El General" Kolusio. This identification is strengthened by the remarkable similarity between this vocabulary and that of Bartlett, a similarity made the more striking by the fact that one was recorded in English, the other in Spanish; the identification is supported, too, by Kolusio's memory of "giving his language" to a stranger "not a Mexicano" yet familiar with the Spanish; and the identification is practically established by the considerable number of terms expressing concepts alien to the Seri (e. g., ax, adobe, house, horse, hog, field, irrigate, pigeon, thresh, tobacco, shirt, the names of the months, etc), evidently acquired through long and intimate acquaintance with Mexican customs and domiciles and modes of thought—for all these concepts were familiar enough to Kolusio, yet to no other known Seri Indian of recent decades. Accordingly it may be deemed practically certain that M Pinart's vocabulary, like that of Commissioner Bartlett, was obtained from Kolusio; and it is at least strongly probable that both the Lavandera-Ramirez and the Tenochio-Pimentel vocabularies were derived from the same aboriginal source—an indubitably excellent source, save for the occasional interjection of alien notions, and the infrequent substitution of foreign equivalents for forgotten terms.

Barred from Seriland by the current war craze, M Pinart was prevented from obtaining much collateral information concerning the Seri; [197] but he concluded (on grounds not stated) that "the Tepoca spoken on

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[1] "The Seris, the chief tells me, comprise about 200 men fit to bear arms—they still live part on the island of Tiburon, part on the coast."

[2] M Pinart's reference to his interpreter is not only impersonal but ambiguous. "Interpretes by the chief of the Seri and another Indian" might be considered to imply two Seri Indians, though it may, with equal linguistic probability, be interpreted to mean the specified Seri and another Indian; and while the temporary presence of a second Seri at the pueblo seems possible, the sum of probabilities points so clearly the other way as to demand the latter interpretation.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

114 x175 197 the south of Rio del Altar is identical with the Seri",[1] and also that "the Guaymas were of the stock of the southern Pimas, or Nebomes".[2]

While M Pinart failed to publish, his linguistic collections were compared, systemized, and made public by Dr Albert S. Gatschet in a notable memoir on "Der Yuma-Sprachstamm", 1883. Comparing the Seri, as represented by the Pinart and Bartlett and Pimentel vocabularies, with the Yavapai, M'Mat, and incidentally with the Konino, Tonto, Cochimi, and other tongues, Dr Gatschet was led to adopt the suggestion of Professor Wilhelm Herzog[3] that the Seri is a dialect of the Yuman stock. In the comparative vocabulary, which comprises about a hundred and forty Seri words (selected from the 611 terms in the Pinart collection), there are perhaps a dozen terms presenting some similarity to those of one or more Yuman dialects; among these are terms for ax, tree, split, tobacco, heaven, pigeon, dog, and others of presumptively or certainly alien character.[4]

Herzog's suggested classification, with Gatschet's indorsement, was accepted even more promptly and widely than the earlier classifications of Pimentel and Orozco. It was tacitly adopted by Director J. W. Powell in his classic arrangement of Indian linguistic families of America north of Mexico;[5] it was explicitly approved by Adolph F. Bandelier in his "Final Report of Investigations";[6] and it was implicitly accepted and fortified by Dr Daniel G. Brinton in his work on "The American Race".[7] Brinton's Seri words were "chiefly from the satisfactory vocabulary obtained by the late John Russell Bartlett"; of the 21 terms, about 8 (including that for the alien concept "house") suggest affinity with the Yuman, chiefly in the Mohave dialect; the others are either wholly distinct or only superficially similar, e. g., in the concurrence of a consonant or two, or merely in the correspondence in number of syllables.[8]

114 x175 Stated briefly, the scientific researches relating to Seriland and the Seri during the fifty years from the fourth decade of the century to the middle of the last decade resulted in (1) a satisfactory survey of the coast, (2) the collection of two excellent Seri vocabularies, with a few others of less extent, and (3) two discrepant linguistic classifications of the tribe, both widely quoted and accepted.

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[1] Gatschet, op. cit., p. [illegible].

113 [2] Bandelier, Final Report of Investigations among the Indians of the Southwestern United States, part I, in Papers of the Archæological Institute of America, American series, III, Cambridge, 1890, p. [illegible]. As already noted, it is probable that the Guaymas lost their "antigua idioma" (Ramirez, op. cit., p. [illegible]) long before M Pinart's visit; and pending definite statement of the facts on which his conclusion rests it is necessary to retain the classification based on specific and repeated, albeit unskilled, observations of the identity of the Guayma speech with that of the Seri.

[3] In correspondence with Dr Gatschet, op. cit., p. [illegible].

[4] Dr. Gatschet has recently revised the data and recognized the distinctness of the Seri tongue (Science, new series, vol. [illegible], p. [illegible]).

[5] Seventh Annual Report of the Bureau of Ethnology, 1885-'86; Washington, 1891, p. 137.

[6] Op. cit., p. 74.

[7] The American Race: A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America; New York, 1891, p. [illegible].

[8] Mr. Hewitt's discussion (postea, pp. [illegible]) gives fuller details of this short vocabulary.

171 481 The Papago, of the same region and linguistic stock, have a racing game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 20 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

101 Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

181 114 175 197 The chronicles of the tribe, especially those written during the seventeenth and eighteenth centuries, indicate that the alien designation was applied loosely and with little appreciation of the tribal organization, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pinart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.[1] Still another distinction was that made between the Upanguayma and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was affiliated linguistically with the Guayma, and hence with the Seri, and 101 114 175 this assignment has been adopted by leading authorities, including Pimentel and Orozco. Among the earlier distinctions based on indus-

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[1] In view of the clear indications, both a priori and a posteriori, that the latest Guayma survivors must have taken the language of the Piman (Yaqui) tribesmen with whom they found refuge, and in view of his failure thus far to present his data for public consideration, M Pinart's inference that the Guayma belonged linguistically to the Piman stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished inquirers as Ramirez and Pimentel.

trial factors was the setting apart of the Salineros, or Seri Salineros; 101
yet this distinction, fortuitous and variable at the best, expressed no
essential character and has not been maintained. A much later dis- 114
tinction was that between the Seri and Tiburones, emphasized by 175X
Mühlenpfordt and exaggerated by Buschmann; but there seem to have
been no better grounds for it than misapprehensions naturally attending a slowly crystallizing nomenclature. In any event it has not been maintained.

At several stages the chroniclers coupled the Seri with other tribes, on various grounds: in the eighteenth century they were thus combined with the Pima, the Piato, and especially the Apache tribes. In the earlier half of the nineteenth century they were frequently coupled in similar fashion with the Pima and Apache tribes, and in the later half of the nineteenth century, and even in its last lustrum, they have been similarly combined with the Yaqui. The later combinations seem to explain the earlier: the Yaqui outbreaks withdraw portions of the arm-bearing population from the Seri frontier, and the marauders take advantage of the withdrawal so regularly that a Yaqui scare is invariably followed by a Seri scare, and hence the two warlike tribes are constantly associated in the minds of the Sonorenses as synchronous insurrectionists; and scrutiny of the earlier chronicles indicates that most of the so-called combinations of former times were of similar sort.

On putting the chronicles together, it seems clear that the term "Seri" 101
was originally of lax application, but was gradually restricted to the
tribe inhabiting Tiburon and ranging adjacent territory, including the collingual but inimical Guayma and Upanguayma, and also the collingual and cotolerant Tepoka; and that the various Piman tribes, as well as the Apache, were always distinct, and commonly if not invariably inimical.

The ethnic relations of the Seri people attracted early and repeated
attention. Humboldt gave currency, albeit not unquestioningly, to a 114
supposed Chinese or related Oriental affiliation; Hardy noted the sim- 174
ilarity of the Seri tongue to that of the Patagonians; Lavandera classed
the language as Arabic; Stone and Bancroft circulated a supposed identification of the speech with the Welsh; Ramirez, and more especially Pimentel, narrowed the field of affiliation to Mexico and defined the tongue as distinct; Orozco y Berra, and more especially Malte-Brun, slightly reextended the field and suggested affiliation with the Caribs; while Herzog, Gatschet, and Brinton reextended the field in another direction and saw, in a vocabulary obtained from a Seri scion but alien
thinker, similarities between the Serian and Yuman tongues. The [197]
recent researches tend strongly to corroborate the evidence collected and the conclusions reached by Ramirez and Pimentel; for the somewhat extended comparisons between the Serian and neighboring languages (introduced and discussed in other paragraphs) indicate that the

114 Seri tongue is distinct save for two or three Cochimi or other Yuman
174 elements, which may be loan words such as might readily have been
obtained through the largely inimical interchange of earlier centuries
[197] described by Padre Juan Maria de Sonora and other pioneer observers—
certainly the slight and superficial similarities with other tongues of
the region seem insufficient to meet the classific requirement of suppositious
descent from "a common ancestral speech".[1] Accordingly
101 the group may be defined (at least provisionally) as a linguistic family
197 or stock, and may be distinguished by the family name long ago applied
by Pimentel and Orozco, with the termination prescribed in Powell's
fifth rule,[2] viz, *Serian*. Conformably, the classification of the group
would become—

Serian stock, comprising—
- Seri tribe, including Tiburones and (certain) Salineros;
- Tepoka tribe;
- Guayma tribe;
- Upanguayma tribe.

Naturally this classification is provisional in certain respects. It is
101 little more than tentative in so far as the Tepoka are concerned, since
114 no word of the Tepoka tongue has ever been recorded, so far as is
known, and since the tribe is still extant and within reach of research;
197 it must be held provisional also in respect to the separateness of the
stock, which may be found in the future to be affiliated with neighboring
stocks, though the effect of the more recent and more critical researches
in eliminating supposed evidences of affiliation points in the opposite
direction. The arrangement is in some measure provisional also with
respect to the relations between the long-extinct Guayma and Upanguayma
and the type tribe, especially since contrary suggestion has been
offered in terms implying the existence of unpublished data; yet the
presumption in favor of the critical work by Ramirez, Pimentel, and
Orozco is so strong that practically this feature of the classification
may be deemed final.

No attempt has been made to render the tribal synonymy exhaustive,
101 though search of the records has incidentally brought out the more
*175 important synonyms, as follows:

Seri Tribe

CERES—1826; Hardy, Travels, p. 96.
CERI—1875; Pimentel, Lenguas Indigenas, tomo II, p. 229.
CERIS—1745; Villa-Señor, Theatro Americano, p. 391.
CERIS TEPOCAS—1850; Velasco, Noticias Estadisticas, p. 132.
HERI—1859; Buschmann, Die Spuren der aztekischen Sprache, p. 221.
HERIS—1645; Ribas, Triumphos de Nuestra Santa Fee, p. 358.
HYMERES—1720 (?); Van der Aa, map.

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[1] Indian linguistic families, by J. W. Powell, in Seventh Annual Report, Bureau of Ethnology, 1885–'86 (1891), p. 11.

[2] Ibid., p. 10.

475 648 the Seri are absolutely without extratribal affiliations, or even sympathy. When the chronicles of three centuries are scanned in the light of recent knowledge, it seems practically certain that they have been equally isolated since the dawn of Caucasian history in Mexico; and both recent data and the chronicles combine with the principles of demotic development to indicate that the Seri have stood alone from the beginning of their tribal career, and have never foregathered with the neighboring tribes of distinct blood, distinct arts and industries, distinct organization, distinct language, and distinct thought and feeling. 648

114 475 [797] The present isolation of the Seri throws light on their early history and reveals the extent of the misapprehension of the pioneer missionaries, who half deluded themselves and wholly deluded distant readers into the notion that the Seri were really proselyted and actually collected in the mission adjuncts of military posts established to protect settlers against forays of the tribe; for, as illumined by later and fuller knowledge of the tribal characteristics, the chronicles are seen to indicate merely that a few captives, malingerers, cripples, spies, and tribal outcasts were harbored at the missions until death and occasional escapes brought the colonies to a natural end, with no real assimilation of blood or culture on either side. So, too, the persistent tribal antipathy reveals the error of confounding the independent or even inimically related outbreaks of the Seri and of the Pima or Apache with the concerted action of confederated tribes. Doubtless the ever-watchful spies from Tiburon habitually gave notice of the disturbance due to outbreaks of contemporary tribes, just as they do today when the local soldiery are withdrawn for duty on the Yaqui frontier; naturally the civil and military authorities were thereby led to provide for protection against the Seri and Piato, against the Seri and Pima, or against the Seri and Apache at each period of disturbance, just as they provided against the Seri between periods; and it would appear that this association in thought and speech led to the unconscious magnification, in the minds of the chroniclers, of a supposed alliance.

648 In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, and in least—yet still considerable—degree toward their own collinguals and (presumptive) consanguineals.

POPULATION

161 So far as could be ascertained by inquiries of and through Mashém in 1894, the Seri tribe then comprised about 60 or 70 warriors, with between three and four times as many women and children—i. e., the population was apparently between 250 and 350. The group of about 60 (including 17 warriors) seen at Costa Rica was evidently growing rapidly, to judge from the proportion of youths of both sexes, infants in arms, and pregnant women; and there are other indications that

301 [304] The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre ● [114] Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that "one must give them at least a horse or a cow for one" (ante, p. 78); while according to Hardy's record. the nasal fetish is "a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard."[1]

[237]
[291]

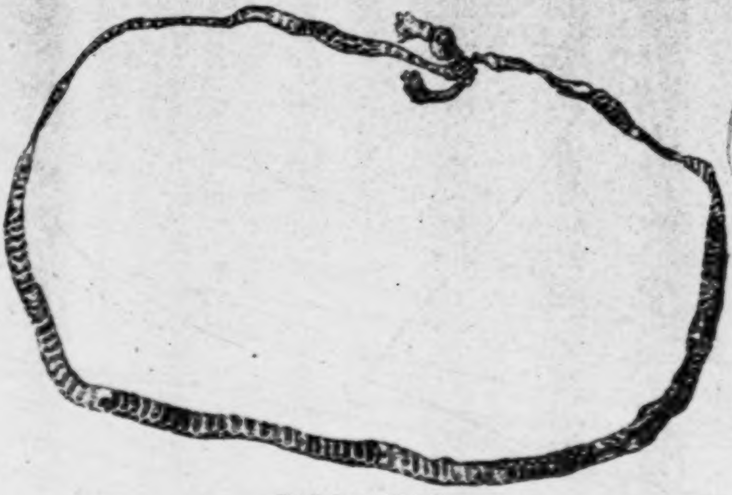

Fig. 7—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

Excepting these mutilations the corporeal decoration of the Seri is 301 304 apparently limited to the face-painting: among the 60 individuals at Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

291 The extra-corporeal decorative devices are of a meagerness and pov-

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[1] Travels, p. [illegible].

225 the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by 264 blows of the hupf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hupf, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. [251] If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of reeking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

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[114] [1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1829, pp. 296-297: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's Island, in the neighborhood of which the Indians catch abundance of 501 turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, elastic pole of 411 about 12 or 14 feet in length, the wood of which is the root of a thorn-mezquite, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whale-bone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an arrow, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the ball and cup are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

225 "A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself transfixed than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[412] [2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see postea, p. [illegible]); the designation is mimetic, or onomatopoetic, from the sound of the stroke, particularly on animal tissue.

Com-

monly the carapace and the longer bones from the flippers of the larger 237
specimens are preserved entire for other uses, and are cleaned only by 321
teeth and talons and tongues, aided by time but not by fire; but the 252
plastron, unless broken up and consumed immediately, is subjected to
a cooking process in which it serves at once as skillet and cutlet—it is
laid on the fire, flesh side up, and at intervals the shriveling tissues are
clawed off and devoured, while at last the scorched or charred scutes
themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle- 225
fishing is the excellent adaptation of means to ends. The graceful and
effective balsa is in large measure an appurtenance of the industry;
the harpoon is hardly heavier and is much simpler than a trout-fishing
tackle, yet serves for the certain capture of a 200-pound turtle; and the
art of fishing for a quarry so shy and elusive that Caucasians may spend
weeks on the shores without seeing a specimen is reduced to a perfection
even transcending that of such artifacts as the light harpoon and
fragile olla. Hardly less significant is the nonuse of that nearly universal
implement, the knife, in every stage of the taking and consumption
of the characteristic tribal prey; for it may fairly be inferred that the
comparative inutility of the knife in dissevering the hard and horny
chelonian derm, and the comparative effectiveness of the shell-breaking
and bone-crushing hupf, have reacted cumulatively on the instincts of
the tribe to retard the adoption of cutting devices. Of much significance,
too, is the limited cooking process; for the habitual consumption of raw [252]
flesh betokens a fireless ancestry at no remote stage, while the crude
cooking of (and in) that portion of the shell not consecrated to other
uses might well form the germ of broiling or boiling on the one hand and
of culinary utensils on the other hand. On the whole, the Seri turtle
industry indicates a delicate adjustment of both vital and activital processes
to a distinctive environment, in which the abundant chelonian
fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of 174
177
Seriland so long that it is difficult to learn much of the turtle-fishing 411

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[1] These details were furnished largely by Mashém and Señor Encinas, but were verified in essentials [114]
by personal observation of dietetic customs at Costa Rica in 1894, and they were corroborated by
observations on both shores of El Infiernillo and Bahia Kunkaak in 1895. Especially significant were
the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of
the exploring party. The indications were clear that the turtle had been landed and largely consumed
before the fire was kindled, and that the cooking of the denser portions had hardly been commenced
before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing
embers, but the harpoon (the specimen illustrated in figure 20), the still bloody and greasy hupf (that
represented in plate xxvi), and the fire-sticks were left behind. Gnawed fragments of charred plastrons
are common relics about hastily abandoned camps generally.

000 those so fully described by Hough,[1] and serves to explain the otherwise
obscure genesis of the fire-sense, which must have accompanied and
shaped that most significant of all steps in human progress, the conquest of fire.

The modern coordinate of the Seri arrow is the bow, made preferably
411 from a straight and slender branch of the palo blanco. A typical
specimen is illustrated in plate XXX; it is 4 feet 9¼ inches long, with
the outer face convex and the inner face flat; greatest width 1⅞ inches,
narrowed to 1¼ inches at the hand-hold; thickness at the hand-hold 1
inch, thinning to five-eighths inch at 8 inches from this point; tapering
gradually in both dimensions toward the extremities, which are rudely
notched to receive the cord (of mesquite-root fiber). The specimen
[284] illustrated has been cracked and repaired in two places; in one place
the repair was effected by a rough wrapping of sinew, and in the other
by slipping over the wood a natural sheath of rawhide from the leg of
a deer. The specimen is of added interest in that it combines bow
[372] and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes
being worn out to the notched margin, and the other remaining in
usable condition, as shown in the enlarged marginal drawing.[2]

Compared with the delicately finished and graceful arrow, the typical
bow is a rude and clumsy device; it displays little skill in the
selection and shaping of material, and evidently involves little labor
in manufacture—indeed, the indications are that more actual labor is
spent in the construction of a single arrow than in the making of a
bow, while the arrow-making is expert work, betokening craft of a high
order, and the bow-making little more than simple handiwork of the
lowest order. The comparison affords some indication of the genesis
[174] of Seri archery, and at the same time corroborates the independent
suggestion that the arrow is of so much greater antiquity than the
bow as to represent a distinct stage in cultural development—though
the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894
● 114 assume the normal archery attitude, with but moderate success, the
best pose obtained (illustrated in plate XXVIII) being manifestly unnat-
123 ural and a mere reflection of the attitude in the mind of the Caucasian
126 poser; while the results of inquiries served only to indicate that the
normal archery attitude was purposely avoided for reasons not ascertained.
Fortunately another observer was more successful: in the
course of the United States hydrographic surveys in 1873, Commander
(now Admiral) Dewey received several visits from Seri warriors on
board the *Narragansett*; and on the occasion of one of these visits, Mr
114 Hector von Bayer, of the hydrographic party, caught a photograph of
126 an archer in the act of drawing his bow. The negative was accident-

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[1] Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt II, 1890, pp. 531-587, and elsewhere.

[2] Ordinarily the nether fire-stick is of soft and porous wood, flotsam palm-wood and water-logged pine being preferred.

ally shattered, and no prints are known to have been made from it; 114
but the fragments were carefully joined, and were kindly transferred
to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX 126
was carefully drawn. The posture (partly concealed by the drapery) is
extraordinary, being quite beyond the reach of the average human, and 411
impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either [224]
leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis[1] that the bow was derived from the corded throwing-stick. While the [171]
critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.[2] On the whole the Seri mode of using the bow, like its crude form and rude [174]
finish, indicates that it is a relatively new and ill-developed artifact, possibly accultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the 224
individual taking of large game is effected either by stealthy stalking or by patient ambuscade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

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[1] The Arrow; Proceedings Am. Ass. Adv. Sci., vol. XLIV, 1895, pp. 232-240.

[2] Glave's Journey to the Livingstone Tree, The Century Magazine, vol. LII, 1896, p. 766.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-hand information and far-traveled rumor—credit the Seri with habitual [114] use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrowpoint he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-akk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

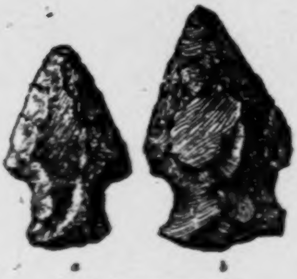

FIG. 37—Seri arrowpoints.

172 411 The 1895 expedition was slightly more successful in the search for Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an ahst, several shells

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[1] The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows; but whether they are poisoned, I do not know." Travels, p. 296.

1: McGee E-5 (1894-1895)1898 NU31 Ser! NU31

in which the breath is life, and the lungs at once the seat and the 278
symbol of vitality. Naturally the fleshly symbol is from a dead body; and just as the lung denotes vitality in life, so (in primitive thought) it denotes an emphasized, as it were an incarnated, antithesis of vitality in death. Next, as the recipes continue, this death-symbol is exposed to the most potent agencies of death—to the bites of maddened rattlesnakes, to the stings of irritated scorpions, to the venomed trailings of harried centipedes. Then the deadly creatures are themselves killed, and the fanged heads of the serpents, the stinging tails of the scorpions, and the fiery feet of the centipedes, together with portions of redolent ordure from the grave-cairns, and other symbols of death and decay are crushed and macerated with the mass in a wizard's brew, grewsome beyond the emasculated and degraded witch's broth of medieval times. Finally, the grisly mess is allowed to simmer in a stinkpot[1] shell under the fierce desert sun until its ripeness and putrid potency are attested by the rank fetor of death; when it is ready for its ruthless use. Thus the entire recipe is thaumaturgic in concept, necromantic in detail; it represents merely the malevolent machinations of the medicine man seeking success by spells and enchantments; it stands for no rational system of thought or practice, but pertains wholly to the plane of shamanism and sorcery. So interpreted the recipe is readily understood; the several witnesses who have independently obtained it are justified, and Mashém's details and unwilling intimations are made clear—especially if the sacrificed flesh about the wound in deer or lion be deemed an oblation, such as primitive folk are given to making.

While thus the motive of the medicine-man in compounding his loathsome mess is wholly necromantic, serious consequences of its use must occasionally supervene; and though these may be incidental so far as the philosophy is concerned, they may tend reflexly toward the perpetuation of the custom. In the course of the preparation of the charm-poison, and especially in the final ripening process, morbific germs and ptomaines must be developed; these may retain their virulence up to the time of use, particularly when a batch of poison is prepared for a special occasion and the arrows are used while the application is still fresh; and in such cases the wound might initiate septicemia of the sort described in Castañeda's early narrative and still more clearly displayed by Señor Encinas' saddle-horse (ante, p. 112). Naturally the incidentally zymotic varnish frequently fails of effect, and can hardly be expected to remain morbific long enough to be detected in laboratory experiments; yet it is probable, as attested by Mashém's guarded expressions, that the occasionally terrible results of such poisoning are within the ken of the Seri shamans.

It is noteworthy that the various early accounts of the Seri arrow- 114
poisoning are strikingly consistent, though sufficiently diverse to 279

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[1] Cinosternum sonoriense (?).

278 [114] attest independence in origin; it is also noteworthy that several of the accounts are given hesitatingly and half qualifiedly, with alternative references (obviously hypothetical) to vegetal sources of poison. Thus the author of "Rudo Ensayo" qualified a characteristic (though brief) account of the preparation of the poison by adding: "But this is mere guesswork, and no doubt the main ingredient is some root."[1] So, too, Hardy described the compounding of the brew in much detail, adding the significant statement that "when the whole mass is in a high state of corruption the old women take the arrows and pass their points through it"; yet he could not resist the alternative hypothesis, and added: "Others again say that the poison is obtained from the juice of the yerba de la flécha (arrow-wort)."[2] Bartlett "was told that the Ceris tip their arrows with poison; but how it was effected I [he] could not learn," and so he contented himself with quoting Hardy's account.[3] Stone gave the recipe in fairly similar terms, adding that the morbific mass is hung up "to putrefy in a bag, and in the drippings of this bag they soak their arrowheads"; and he gave a characteristic account of the effect of a wound from a poisoned arrow on a human subject (ante, p. 100). Pajeken independently attested the virulence of the poison, and described the consequences of a slight wound suffered by his horse (ante, p. 101), while Pimentel gave independent corroboration, and Orozco y Berra added the further information that the proverbially deadly poison is fortified "by superstitious practices" (ante, p. 103). Bancroft gave currency to the customary recipe, and also to the complementary hypothesis that the "magot" may be the source of the poison; while Dewey merely mentioned the reputed use of poisoned arrows. Like their predecessors, the vaqueros of today are familiar with the tradition of a necromantic brew; but many of them—like Don Jesus Omada, of Bacuachito, and Don Ramon Noriega, of Pozo Noriega—display a much more lively interest in the local yerba mala, or yerba de flécha, of which they stand in such mortal dread that they can hardly be induced to approach a clump of it, and which they conceive must add the final crux to the brew. This plant was described in "Rudo Ensayo": "Magó, in the Opata language, is a small tree, very green, luxuriant, and beautiful to the eye; but it contains a deadly juice which flows upon making a slight incision in the bark. The natives rub their arrows with it, and for this reason they call it arrow-grass; but at present they use very little."[4] Elsewhere the anonymous author mentions the use of (presumably) this poison by the Jova, and describes it as "so deadly that it kills not only the wounded person, but also him who undertakes the cure by sucking the wound, as is customary with all the Indians"; the description implying that the infection is irremediable.[5] Yet he apparently discriminated this poison from that of the Seri, for which another plant known as caramatraca

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[1] Op. cit., p. 188; cf. ante, p. 73.

[2] Travels, p. 299; cf. ante, p. 67.

[3] Personal Narrative, p. 465.

[4] Op. cit., p. 191.

[5] Op. cit., pp. 137, 138.

the character of the man; in very fact, it at the same time both measures 585 and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of [835] receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical 124 inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar-Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana Maria. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by [845] normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.[1] The confidence in the verity of the customs was such as not to be 114 impaired seriously by the fact that no records of coincident moral tests 171 were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies,

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[1] It may be observed that Kolusio, when visited in January, 1896, failed to corroborate the descriptions of Mashém and the matrons; but his failure occasioned little surprise for the reason that he has [115] not lived with his tribe since early boyhood, and is equally uninformed (or noncommunicative) concerning the myths, ceremonies, and even the totems of the tribe.

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and to an affectation of self-restraint for a moon on the part of Zuñi grooms noted by Frank Hamilton Cushing. Accordingly the facts were announced in a preliminary paper,[1] and were shown to stand in such relation to the marital customs of other aboriginal tribes as practically to demonstrate their validity, and at the same time to locate the Seri customs on a lower plane of cultural development than any hitherto definitely recognized.

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Happily, subsequent researches have resulted in the discovery of records corroborative of the primitive customs observed by the Seri, and also of the assignment of serial place to these customs. The most specific record is that of John Giles (or Gyles), who spent his youth as a captive among the northeastern Algonquian Indians (probably the Maliseet or some closely related Abnaki tribe), from August 2, 1689, to June 28, 1698. Referring to the marital customs of the tribe, he observed:

> If parents have a daughter marriageable, they seek a husband for her who is a good hunter. If she has been educated to make monoodah (Indian bags), birch dishes, to lace snowshoes, make Indian shoes, string wampum belts, sew birch canoes, and boil the kettle, she is esteemed a lady of fine accomplishments. If the man sought out for her husband have a gun and ammunition, a canoe, a spear, a hatchet, a monoodah, a crooked knife, looking-glass and paint, a pipe, tobacco, and knot-bowl to toss a kind of dice in, he is accounted a gentleman of a plentiful fortune. Whatever the new married man procures the first year belongs to his wife's parents. If the young pair have a child within a year and nine months, they are thought to be very forward and libidinous persons.[2]

This record is of peculiar interest in that it definitely specifies a custom corresponding with the material test of the Seri, and unmistakably implies the existence, at least in vestigial or sentimental form, of a custom corresponding with the moral test of Seriland; and it is particularly noteworthy as coming from a remote tribe occupying a distant part of the continent.

A somewhat less specific corroboration is found in Lawson's account of the Carolina tribes. He observes:

> When any young Indian has a mind for such a girl to his wife, he, or some one for him, goes to the young woman's parents, if living; if not, to her nearest relations, where they make offers of the match betwixt the couple. The relations reply, they will consider of it; which serves for a sufficient answer, till there be a second meeting about the marriage, which is generally brought into debate before all the relations, that are old people, on both sides, and sometimes the king, with all his great men, give their opinions therein. If it be agreed on, and the young woman approve thereof, for these savages never give their children in marriage without their own consent, the man pays so much for his wife; and the handsomer she is the greater price she bears. Now, it often happens that the man has not so much of their money ready as he is to pay for his wife; but if they know him to be a good hunter, and that he can raise the sum agreed for, in some few moons, or any little

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[1] The Beginning of Marriage, American Anthropologist, vol. IX, 1896, pp. 371-383.

[2] Memoirs | of | Odd Adventures, | Strange Deliverances, etc. | in the | Captivity of John Giles, Esq., | Commander of the Garrison on Saint George river, in the | District of Maine. | Written by Himself. | Originally published at Boston, 1736. || Printed for William Dodge. || Cincinnati: | Spiller & Gates, printers, 169 Vine street. | 1869.—P. 43.

condition characterized by absence of property and thrift-sense; while 000 its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

649 764 The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike toothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

114 764 The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1737 would seem to be unusual only in its fullness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherias heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well-marked cemeteries adjoin some of the rancherias of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect [562] that the mourning ceremonies are important only in connection with women—i. e., matrons—because "the woman is just like the family" ("la muger es como la familia"); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

171 764 562 The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal socialry coincided with that of the

THE SERI [p.3]

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Introduction

The present paper is the first product of field studies made 121
between January and March, 1930, in Arizona, Sonora, and Sinaloa,
under a joint expedition of the Southwest Museum, Los Angeles,
and the University of California. The financial contribution of the
University was the gift of Mrs. Ethel W. Crocker. While the purpose
of the trip was to define rather than solve problems, the following
pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of 114
California, are often considered the wildest and most primitive tribe
surviving in North America. They owe this repute partly to McGee's
monograph about them, in the Seventeenth Annual Report of the
Bureau of American Ethnology. It is easy to read between the lines
of this description that McGee leaned toward a romantic and imaginative
interpretation of the Seri. Also, his actual contacts with the
people themselves were brief, and hampered by imperfect communication.
Moreover, the Seri have been for three hundred years in 177
contact with Spaniards and Mexicans, part of the time even under
direct mission control. It therefore seems doubtful whether their
backwardness could be the result wholly of preserved primitiveness,
and may not rather be attributable to a recalcitrant degeneration. In [121]
order to answer this question, and to place Seri culture at least tentatively
among the other tribal cultures of the Southwest instead of
leaving it as an unexplained and lurid abnormality, a brief visit to
them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson 123
of Hermosillo and Rancho San Rafael, who is now the Mexican
Government's *Jefe de Vigilancia* for the Seris, and in effect what in 648
the United States would be known as Indian Agent for the tribe. He
has protected and befriended them, kept them in turn in bounds, and
secured some governmental assistance for them, under which they
are making a beginning of adaptation to the modern world. At any [609]
rate, the mutual raidings and killings have stopped, and the Seri,
though still very suspicious of most of the neighboring settlers and
of strangers, look upon Sr. Thomson as their protector and friend.
Without his introduction and experience, many less data could have
been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them 114
six days, half of them on the island. This is about as long a time as
McGee spent with them—all of it at the cattle ranch of Costa Rica. 131
McGee also explored the island and its camps at some length, but
without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, 114
has three times visited Tiburon to form an ethnological collection for
the Museum of the American Indian, Heye Foundation, I attempted 121
no examination of Seri material or economic culture, which Mr.

114 121 Davis has had fuller opportunity to investigate, but confined my attention to the social and religious sides of their life. There was the more reason for this since it is in dealing with these latter aspects, where verbal communications are as important as observation, that McGee's monograph is most tenuous and dubious. I also secured linguistic notes for the preliminary placing of the curious tonal speech of the Seri.

178 182 Seri culture in its present form is a fragmentary thing such as could hardly have existed under purely native conditions. Religion especially has suffered, no doubt under Christian influence, without many elements of Christianity having been taken over in exchange. Of mythology, only tatters seem to remain; of ritual, little more; only shamanism seems to be fairly well preserved. Nor, beyond the Spanish names for God and the cross, do the Seri give evidence of being or having been Catholics. The result is that they seem remarkably religionless. I do not know of a native people that appears so free from superstition and so unspiritual in its attitudes. Possibly I conferred with the wrong informants; but those I talked with seemed unsecretive. Social culture is better preserved, as is evident from a set of kinship terms that are numerous, precise, and untouched by Spanish concepts. On the other hand, there is little formal social organization. Whether this is also the result of a loss, is hard to say. The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed. Games and the calendar are wholly native and intact, but taboos connected with sex, age, food, and the like seem fewer than among the backward tribes of the southwestern United States. It seems reasonable to construe this condition as the result of varyingly hostile, parasitic, and missionizing Spanish-Mexican contacts; especially when one realizes how overwhelmingly, though also spottily, this influence has affected the other tribes of Sonora—the Yaqui, Mayo, Pima, and Opata.

101 131 174 Historically the Seri are not a tribe but the consolidated remnant of a series of dialectically distinct tribes that once held the barren coast of Sonora from Guaymas to Puerto Libertad. Tiburon Island is the stronghold in which the mixed survivors, probably now numbering less than 200, have taken refuge, and, owing to its inaccessibility, drought, and poverty, have succeeded in maintaining themselves and their blended and reduced culture. Toward the interior, it is doubtful if they ranged beyond the present line of the Southern Pacific railroad, if that far. Orozco y Berra indeed assigns them territory up the Sonora River to Ures, on his famous map, which is still basic to all other ethnic maps of Mexico. But from Hermosillo

197 are inconclusive. Some of the outstanding speech similarities and
171 differences are given in a section of the present paper; a fuller presentation will be made in a subsequent classification of the Yuman languages.

The Yuman tribes of the United States are better known, and
171 there are published or collected accounts of the Diegueño, Kamia, Cocopa, Yuma, Mohave, Maricopa-Halchidhoma, Yavapai, Walapai, and Havasupai. These fall into two groups, culturally: the farming tribes of the Colorado (and Gila) bottomlands, and the gathering tribes of the desert and semi-desert of Arizona and southern California, the latter again affiliating with those of northern Baja California, such as the Kiliwa and Akwa'ala-Paipai. As might be expected, it is the desert Yumans of Arizona who show the greater number of resemblances to the Seri and fewest differences.

The Pima as the immediate neighbors of the Seri, and the Opata and Cahita tribes beyond, ought to show many similarities with the Seri, plus differences due to their agriculture and activities like weaving which are normally encouraged by sedentary habits.

Such are some of the indications as to the history of the Seri
114 and their culture, as discussed more in detail below so far as the
preliminary data available allow. Further and intensive investigation
121 is obviously needed. On the side of material life, Mr. Davis' studies
122 ought largely to fill the need. For social and spiritual culture, the work will be difficult. It is not that the Seri are unwilling, but that they are inaccessible and hard to communicate with. The obvious procedure would be a study of their speech until it served as a medium. In that way both their language and their culture could be recorded hand in hand. But the obstacles are numerous. The island is thirty miles long by twenty wide. There is not a roof on it. The six summer months are extremely hot, and, along the coast, said to be almost insufferable from gnats and mosquitoes. Most of the few water holes are inland; the Seri live, except during the cactus and mesquite harvest, scattered in small settlements along the shore, often several miles from water. There is no communication across the strait, except by open boat, subject to weather conditions; and then it is twenty miles to the nearest house and a hundred to a town. Life on the island would be both harsh and monotonous to an unusual degree. Nor can the Seri as yet be studied by taking one or two of them to civilization for a prolonged stay. They soon become restless and homesick. Added to all this is the fact that their Spanish, though reasonably fluent in some cases, is ungrammatical, and would hardly serve for securing paradigms or accurate translations of texts; and while able to endure hardships, the people are not accustomed to steady work or mental concentration. The difficulties would not be insuperable, when the destined linguist-ethnologist undertakes the task; but he should not under-rate them.

McGEE ON THE SERI

● 114 [128] The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

114 415 The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

114 Head loads are carried on a ring of "yucca" fiber (p. 184).

482 The carrying stick or yoke, with nets to hold ollas, is considered accultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

114 773 McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

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[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 281) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being sub-chief Mashém who spoke Spanish, and Juana Maria. A Spanish-English interpreter is referred to. In 1895 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kolusio, an old Seri official interpreter who had left the island in childhood, never revisited it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the *rancheria* on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 8, 234, 1930.

sounds like an expectable enough mythic idea, but seems involved with McGee's dubious conceptions as to totemism, discussed below. 114 223

The two-pointed fish-spear, with serrated points 6 inches long and spreading 5°, seen by Hardy (McGee, p. 193), is interesting because seemingly unreported in or near the area. 114 227

"Fishing" with staked pelicans who are then fed by free birds, is authenticated by the statement of Venegas for lower California, (McGee, p. 193). [226 231]

No fish nets, hooks, or lines were seen by McGee among the abandoned effects on Tiburon (p. 194). This is in accord with my observation. The abundance of sharks may interfere with net or deep water fishing.

The bow (p. 200) is of *palo blanco;* the release (pls. 28, 29), Mediterranean; the archer's position (pl. 29), with elbow above head, suggests a quick downward shot at a target or game lying on the ground not far away. 114 411

Mesquite, according to McGee (p. 207), is ground on the metate. Sr. Thomson told me of its being pounded in a hole in the ground. The Seri gave me the name a'kata for what I understood to be this earth mortar. According to Sr. Thomson's description, the flour from the first beans cakes and lines the cavity firmly, so that the bulk of the material is secured quite cleanly. In general, mesquite is mortar-pounded rather than metate-ground by the tribes from whom we have records, as is expectable from the woody nature of the beans. 114 252

McGee (p. 207) noted the viznaga cactus, Echinocistus, as rare in the Seri habitat, presumably owing to its use for water by the natives. I made the same observation on the mainland, but Sr. Thomson stated that along the roads the plant is being gathered for candying. 114 137

The one basket described by McGee (p. 208, fig. 24) is bundle-coiled and plain. The only one I saw in use among the Seri was ornamented with a plain reddish band. Sr. Thomson presented me with two which bear patterns (fig. 13), and showed me a photograph of a collection made by Mr. Davis for the Museum of the American Indian, Heye Foundation, nearly all of which were decorated, some fairly elaborately. Several of these are shown by courtesy of that institution in figure 12. As McGee observes, there is obvious resemblance to Southwestern baskets; especially of the Papago, Pima, and Apache. [171] Southern California basketry is less similar. That of Baja California is unknown from specimens, though the mention of water-tight vessels used for winnowing and parching suggests a coiled tray of Seri type. The surviving tribes of Sonora other than the Seri use few baskets distinguishable from those of the non-Indian population. 114 285

● 114 The Seri "second harvest" of cactus seeds (p. 209), which Bae-
262 gert and Clavigero also describe from Lower California (p. 211) is
found also among the American Pima,[4] and is therefore likely to
[171 have prevailed as far as Cereus fruits were a principal food supply.
514] The ground-squirrel is not eaten by the Seri, the badger not by
the Baja Californieños (p. 212).

McGee gives a valuable percentage estimate of Seri food composition: land game, large and small (including 6% of stolen stock), 21%; pelicans, other waterfowl, and eggs, 13; sea turtles, 25; fish, 15; shellfish, 10; cactus fruit, 9; other plants, 6; miscellaneous, 2; total animal, 84; maritime, nearly two-thirds. My impression is that clams, other mollusks, and crabs constitute more than a tenth of the total consumption. Clams especially can usually be obtained at low tide when wind and water prevent other food taking. I should also be inclined to raise the proportion of plant food, especially mesquite. The use of agave was almost certainly limited chiefly by the supply. Sealions, porpoises, and occasional whales could perhaps hardly be accounted for under the two percent of miscellaneous. On the other hand, deer are evidently taken only occasionally, and the figure for turtles seems too high, these animals being absent from Seri waters for months in the year and always free-swimming. McGee appears to have over-emphasized the importance of the turtle in Seri thought as well as life. I would incline to estimate the proportion of animal food in native times, before domestic animals could be preyed on, as rather under three-fourths of the total; of maritime, as perhaps three-fifths. Even these figures might be high for the bands primarily resident on the mainland, with free access to the mesquite thickets of the lower Sonora and Bacuachi (Bacavachi) courses, and the countless cactuses.

A double-bladed paddle pictured by the Dewey-Narragansett
114 expedition of 1873 is reproduced by McGee (p. 219, fig. 28) without
171 comment. This type of paddle is established for the Seri, Santa
501 Barbara islanders, and San Francisco Bay Indians; then apparently
is lacking until the Eskimo-Aleutian area. Among the Chumash it is native and associated with a plank-built canoe. On San Francisco Bay it was used with the rush balsa, and may or may not be due to Aleutian sea-otter hunters introduced by the Russians. It seems possible that the Seri and Chumash occurrences would prove connected by occasional use in Baja California, if we had fuller data, since some of the natives there went several leagues out into the open sea. We are so accustomed to think of the two-bladed paddle as an adjunct of the specialized kayak, that it too impresses as a complicated device, inappropriate with a simple raft. As a matter of fact, wherever scarcity of wood, or lack of skill and usage in working it,[5] resulted

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[4] Russell, BAE-R 26:71, 1908.

[5] Cf. The Valley Nisenan, UC-PAAE, 24:253-290, 1929.

in a paddle blade being cut separately from the shaft, the inventive 114
step from attaching one blade to attaching two blades would have 171
been insignificant—in fact, would be an improvement or variation rather than an invention. The determining factor as to its adoption 501
would probably be the type of navigation as set by water conditions. This is borne out by the distribution of the double paddle, which clings to areas of open salt-water navigation or large bays approximating open water conditions. On rivers and lakes the double paddle would rarely help and often be in the way. In this way the varying association with skin boat, wooden boat, and raft boat seems accounted for. Another factor must be size of the vessel navigated. A broad or high canoe would scarcely allow of alternate paddling on both sides. This may be the cause of the absence of the implement on the Northwest Coast. Whether the Arctic and the California-Seri occurrences are to be historically connected, must probably be left an open question for the present. An answer in favor of connection will evidently depend on the establishment of sufficient other connections to set up a favorable presumption. Until then, the considerations just mentioned make the possibility of independent origin equally plausible.

The single-bladed paddles seen by McGee (p. 219) and myself 114
were two-piece and hafted with nails. McGee is more interested in 501
balsa propulsion by recumbent women with hands, shells, or unhandled blades. That such crude devices were used along shore or in 502
bays often enough to be mentioned, is wholly in line with the conspicuous Seri indifference, slovenliness, and lack of standards; but it is also obvious that real paddles being known and made, these would be the ones taken on open sea voyages of a dozen miles in a region of notably variable winds and currents. The Seri are never fools in practical matters within their compass; and they could not have acquired their indubitable navigating skill by letting their women do most of their paddling with bare hands. The one woman I saw aboard was carried as a passenger across the Infiernillo.

What is typical of Seri habits is that the harpoon shaft is also [411]
used for poling, and the harpoon cord as anchor rope, tow-line along shore, sheet rope, and for tying a blanket to a mast and pole to serve as sail; just as the bailer of a leaky skiff is an enamel-ware plate or pot employed at other times for food. The whole harpoon, including the rod-iron point, but dismounted, seems regularly to be taken along on a transport voyage.

The Seri houses I saw opposite Punta San Miguel were like 114
those described by McGee (pp. 221-223): long, narrow, low, and 342
open at least at one end; but they were unroofed. There was also one of double length, and another "joined obliquely"—that is, annexes occupied by younger kin and their families. The lengthwise double house was open through, though constricted at both ends and the

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342 middle. Two imperfect wind-breaks of brush, less than a quarter of
a circumference in curvature, stood near the camp..

On the subject of textiles and textile clothing (pp. 171, 225-232),
114 McGee is necessarily vague on account of lack of specimens. He
says that native kilts, from waist to knee, were either of birdskin or
281 "a rectangle of coarse textile fabric," "woven probably on some prim-
286 itive device"; that it is practically certain that a long-sleeved, short-
291 bodied shirt or wammus is "of local aboriginal design" and was
"made primitively of haircloth or native textiles"; that the probable
genetic series of Seri garments was: 1, the pelican-skin robe used as
a kilt, 2, the textile shirt, 3, the textile kilt; and that Seri fabrics,
according to a Mexican informant, "resemble coarse bagging, and
are woven or netted quite plainly."

Human hair cord could be netted, or twined in double weft into
114 basket-like bags or mats; it could hardly be woven into cloth without
171 a loom. The same holds of *ixtle*, agave fiber. Bast of willow, cotton-
wood, beanstalk, such as was spun and twined, and perhaps woven
286 on a limited scale, by the Colorado river Yuman tribes, was not available to the Seri, though they may have had nearly equally soft substitutes, even in their desert. Cotton they did not have. *Ixtle* is a strong, harsh fiber, excellent for cordage, nets, open-mesh bags, and the like, and still largely used in Mexico for such purposes. It would also serve well for fringe-aprons, for which the Lower Californians used it. A fabric from it would be rough and stiff, giving little warmth, not very satisfactory for a kilt, and quite unserviceable for a fitted garment like a sleeved shirt. Cotton was the prevailing garment material found along the coast by the first Spaniards, north up to the Cahita (Ka'ita, namely Tehueco, Mayo, Yaqui); here *ixtle* became more prevalent though cotton persisted; but the type of garment is not clear.

As to looms, *ixtle* is today woven into carrying bags on a heddled belt-loom by the Nahua-speaking Indians of Sinaloa. The Mayo weave woolen girdles on a similar loom. They also weave woolen blankets on a demountable horizontal loom, the warp passing continuously around the two heavy yarn beams. It is not clear whether this is a hybrid Spanish or a purely native apparatus. The Opata and Pima Bajo loom is not known. The American Pima weave cotton both on a belt-loom and on a staked horizontal loom, but with warps in a single plane.[6] It is difficult to imagine these looms existing among the Seri, except the first mentioned; and this would not yield them much in the way of garments. There is no reason why they
114 should have worn more than the Lower Californian women's fringe-
aprons, supplemented perhaps by birdskin blankets and loin covers.
291 They no doubt secured occasional garments from neighboring tribes,
434 as they gladly but irregularly wear those of whites today; and this

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[6] Russell, BAE-R, 26:148-153, 1908.

is what their "shirt" (McGee, pl. 29) probably was. The fabrics of 114
McGee's Mexican informant may refer to gunny-sacks made over 291
into improvised imitations of civilized garments; or to single-element [434]
carrying bags. It is entirely possible that contact with the cloth-weaving tribes of Sonora long ago induced the Seri to shrink from habitual complete nudity; but it is difficult to imagine them producing even a coarse wearable cloth. McGee's interpretation of the historic sequence of Seri garments is of course wholly speculative.

The cradle shown by McGee (p. 226, fig. 30) consists of a kite- 114
shaped hoop with eight sticks tied across it and a lashing thong passed
back and forth across it half-a-dozen times. Even allowing for some 171
slip of the parts in transport to Washington, this specimen is quite
typical in Seri disregard of evenness, neatness, order, or finish. The 854
Yaqui cradle illustrated by Hrdlička[7] consists of eight or nine lengthwise sticks or canes twined close together. The Lower Californians used a basket or a turtleshell. The Gila Pima and river Yuman cradle is of "ladder" type, and therefore similar in structure to the Seri except that it lacks the point at the bottom and has the sides parallel; it also carries a hood of wickered or twilled splints. As regards basic structure, one form of Maidu cradle is most similar to the Seri; just as the plan of the Yaqui one reappears among Miwok, Yokuts, and Mono a little further south in California.[8] It appears from this irregular distribution that so simple an apparatus as the open or flat baby-carrier, which can be just as serviceable without a definite technique or style entering into it, is likely to vary locally without much significance, and that its forms will indicate historic connection only when they are parallel in a number of details. In these respects it resembles house types. In both these objects, new "inventions," certainly of detail elements and perhaps of basic structure, seem to be readily made and adopted.

McGee's finding (p. 247) that the Seri are "not habitual stone 114
arrow-makers" has a parallel among the river Yumans, and, at least 171
partially, among the remaining Sonoran tribes. His conclusion (p.
259) that the *yerba de la flecha* (magot, Sebastiano bilocularis?) was 208
an Opata but probably not a Seri arrow poison, seems sound. The 411
plant was shown me on the island, and the Seri knew it as venomous, but volunteered nothing as to using it on arrows.

That the question of Seri cannibalism must be left open, with a [266]
preponderance of evidence against the practice (p. 263), also seems a conservative judgment.

As to shields, McGee learned of loose pelican pelts and turtle- 114
shells (p. 264), I of armor and a large upright shield of hide. Both 714
accounts may be right, one referring to emergency pick-ups, the other to prepared defence or attack.

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[7] AA 6, pl. 9, 1904.

[8] BAE-B 78:535, fig. 48, pls. 39, 46.

800 to prepared defence or attack. The Seri mode of life and induced
182 temperament must have led to many instabilities, with make-shifts
often actually more in use, but finished or efficient types of artifact
seemingly latent and sporadically emerging in the stream of their
culture. Thus, the shell alongside the double-bladed paddle; plain
baskets seen in use, but a series patterned in a definite style being
produced as soon as their manufacture was profitable; unroofed and
roofed houses. Similarly, the two-pointed fish-spear and olla carrying-net,
which neither McGee nor I saw, but which may persist in
memory in the culture ready for revival on occasion.

Somewhat similar, perhaps, is the status of polygyny, which
[595] prevailed in McGee's day (p. 279) a half generation after a disastrous
war, but was not the rule, or was successfully disavowed, in earlier
times and to-day.

Errors and Misconstructions

● 114 McGee dwells at length (pp. 152-156) on three strong trends
of Seri life and culture: the pedestrian habit, accompanied by quite
171 exceptional fleetness; a hand and tooth sense with corresponding absence
481 of tool sense; and a race sense unalterably opposed to mixture
with alien blood.

All the Sonora and Southwestern Indians were and largely still are fast and sustained long-distance travelers on foot. There is nothing to show that the Seri were superior to the others. The one time they remember having met the Papago in a foot-ball race, they were beaten. Yaqui warfare is a record of at least equal endurance and ability to evade superior civilized forces. In fact the faculties of the Yaqui are the more remarkable in that they have always been settled farmers and often moved in larger bodies. The incredible fleetness of the Seri was probably most manifest in mesquite thickets and on rocky ground. That they should outrun a horseman on an open plain is the sort of tale that one hears on every frontier and which the more intelligent frontiersman does not take seriously.

Hand and tooth sense was undoubtedly strong among the Seri.
114 The same thing, especially as regards food, is reported for the Lower
171 Californians. But the inference of lack of tool sense is erroneous.
Knives are prized by the Seri, and, along with nails, axes, and the
181 like, are handled with a direct, crude effectiveness. The crudity is
due to the lack of standard, order, and interest in finish which pervades
all Seri cultural manifestations and which rests ultimately on
their essential isolation and self-sufficiency in an unusually forbidding
environment. What a Seri is interested in is not a neat job but
one that will substantially meet his immediate need. Their modern
plank boats are weak in plan, badly joined, and always leaky; but
they serve. A structurally stronger boat would probably profit noth-

ing, because it would be swamped in a sea which it could resist. The 114 joining and calking are always carried far enough that the boat can 171 be bailed faster than it leaks. That the Seri prefer to bail rather than to finick over joints, is a matter of preference. Most of our 181 real frontier life runs on much the same plan, though sprung from a tradition of intrinsic standard and provided with a superior tool equipment. Tribes like the Walapai and Papago, who live in nearly the same desert, show much of the Seri combination of technological crudeness and effectiveness. They do make an exception in basketry, which is what has chiefly reached our museum cases from their culture; but the Davis-Heye collection shows that the Seri too can make baskets of unsuspected quality. My impression, based on the way the Seri handle their knives, boats, bows, and the like, is that they have excellent practical mechanical sense, but that their standards are astonishingly different from our own. Most people that depended so much on sailing their boats as the modern Seri do, would not be content with two sticks, a blanket, and a harpoon line. But, given [501] the willingness to operate with this equipment, very few would be as successful in quickly rigging and skilfully handling the sail. And sailing is something the Seri have recently learned or evolved. They are the frontiersmen of native culture: hardy, rude, unorganized, practical, efficient; but, like our own frontiersmen, in no sense only half emerged from the tool-less animal. McGee was so inspired by the desire to find ultimate "primitiveness" among the Seri that he often ignored the tremendous effect of their habitat which he so well observed and described. After all, in his day cultural evolutionism was still in vogue.

As to race sense, McGee seems partly but only partly right. 114 Chico Romero of his own accord asked me if other Indians had venereal diseases, and on the return question replied that the Seri 186 were entirely free from them. I also saw and heard of no half-breeds. On the other hand, Chico's historical tradition told of the violation and keeping of captive Tepoca women, and since his own son was descended from one of them, in the second generation, Chico's mother-in-law must have been a Tepoca. McGee's "alien conjugal union" as the "blackest crime" (p. 11) is therefore an exaggeration, and his informant's statement that a Papago woman captive among the Seri never could have had children because she was an alien slave (p. 278), must rest upon a misunderstanding.

The groom's continence for a year after marriage as a moral 114 test before admission to full husbandly status (pp. 280-3), is probably 833 a matriarchally colored fantasy based on another misunderstanding. As already mentioned, Chico was interested, but mildly ribaldly 115 amused, at the idea when it was put before him as a foreign Indian custom. He reacted like the average white man under the circumstances, not in the least like an actor skilfully feigning ignorance.

114 583 As to the "total absence" (p. 285) of marriage purchase, whereas I found it, such purchase can hardly be believed to have originated wholly within the last 35 years, in view of its wide distribution in native America.

114 614 The whole matter of maternal lineages crystallized into totemic clans with matron rule (pp. 10-11, 167-8, 269 seq.) seems a fantasy. A careful reading of the passages in questions reveals how much McGee has built up on statements which he conscientiously admits to have been slender, probable only, and subject to possible misunderstanding. It must be remembered that in 1894 the matriarchate as original and primitive was still standard anthropological doctrine. At any rate, I got nothing suggesting even matrilineal reckoning in my indirect approaches to the subject, and explicit denials when it was directly presented.

114 342 That house-building may now and then be "accompanied by a chant" (p. 223) is possible, though it seems out of accord with the haphazard and shiftless methods of Seri work and the flimsy irregularity of their homes; but that the chant was "usually led by the eldest matron" seems more matriarchate.

114 174 That the Upanguayma, Guayma, and Tepoka were successively "extruded" (p. 75) would be correct if there were anything to show that the Seri were the parent stock of superior virtue, conservatism, and faithful attachment to their original habitat.

114 601 The statement (p. 11) that "kinship terms are strikingly scanty," made in the face of round-about and imperfect speech communications with the Seri, I cite only as an indication of the degree of McGee's readiness to fall back upon his preconceptions when facts became thin.

114 304 I did not note the absence of superior medial incisor teeth observed by McGee (p. 169) in married women. If a regular practise, its connection with the puberty rite would be a natural inference. But knocking out of teeth is a rare custom in America.

114 224 McGee's statements (pp. 196-7) that it is "undignified, if not wrong" to kill deer other than with the hands, and that jackrabbits are "customarily taken alive to camp," seem over-emphases. That a sense of sport or passing pride, or lack of weapons, now and then leads to such happenings, I do not doubt; but the Seri seem too practical and unromantic to exact rules on the point. I suspect that a youth who insisted on living up to them would soon be considered a vain bore. I may add that I saw a crippled wild duck hobble about the camp on Tiburon for two days, being played with occasionally by the children—without unusual roughness or unkindliness—and that finally it wandered to the water and gradually drifted off without notice being taken.

114 302 614 Face painting is construed by McGee as sematic of totemic line-

ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ocher red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense. 114 302 614 [386]

Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psychophysiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylicization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26. 114 302 531

Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass. 171 302

The Mohave paintings[9] are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

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[9] Kroeber, Handbook, BAE-B 78, figs. 60-62, 1925. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 39), and the Havasupai (Spier, AMNH-AP 29:166, 1928), are also related.

PHYSICAL TYPE

123 141 I had a calipers and rule with me on Tiburon Island, but no stature rod. The Seri proved not to object to being measured, but in order to avoid the possibility of arousing prejudice, I had left the matter to the last; but for this, my series would have been longer. The results are given in the adjoining table. The somewhat unconventional finger and foot measurements were taken because of the seeming length (more probably only unusual slenderness) of these members, but may give an approximate indication of the bodily height.

114 141 McGee is undoubtedly in error (p. 136) in estimating the average height of Seri men at 1825 mm., of women between 1727 and 1750. I would deduct 100 mm. from these figures.[17] The Seri impressed me as less tall than the Mohave and Maricopa, who run about 1720 to 1740.[18] Hrdlička[19] found the following for the region: 53 American Pima, 1718; 50 Papago, 1709; 50 Yaqui, 1696; 30 Opata, 1670; 53 Mayo, 1673; 1 Seri, 1707. The Seri look taller than they are on account of their slenderness. [142] This in turn might be due to preponderant animal diet, general malnutrition, or congenital type. Certainly their calves, arms, and wrists are notably thin. The forearm bones in particular look long and exceptionally thin. The muscles are generally firm.

Head form, and nose index for adults, run close to those of other Sonoran tribes. Thus:

Cephalic index, 13 Seri men, women, and children, 80.4; Hrdlička,[20] 1 Seri, 81.3; 50 Mayo, 80.3; 31 Opata, 79.3; 49 Yaqui, 78.5. The Pima in the United States are longer headed, 78.1. Eleven Yaqui skulls averaged 75.7, equivalent to 77+ in the head by the usual estimate.

Nasal index, Seri, 4 men of 28 and up, 79.3, 4 women of 20 and up, 74.7, mean of total 8 adults, 77; Hrdlička, 1 Seri, 71.9; 53 Mayo, 80.2; 31 Opata, 81.1; 52 Yaqui, 78.9; 50 Papago, 79.8; 53 American Pima, 78.1; ten Kate, 38 Mohave, 82.

The Seri are slightly broader headed and narrower nosed than the others, but the difference does not seem significant, especially in view of the smallness of the Seri series.

141 142 Physiognomically the Seri are quite different both from the Yaqui and Mayo and the American Pima and Papago; in fact con-

[Text continues on page 38]

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[17] Hrdlička, in McGee, 142-147, gives the following on the skeleton of a Seri woman of age 20-24: Stature (computed by Manouvrier method), about 1620 mm.; indicated musculature, ample; cranial index (occipital deformation, probably unintentional), 88.5; nasal index, 49; skull capacity (Broca) 1545, (Flower) 1490 cc.

[18] Mohave, 1716; Yuma, 1722; Maricopa, 1749 (Hrdlička, in Putnam Anniversary Volume, 405-426, 1909); Maricopa, 1722 (ten Kate, Journ. Am. Ethnol. and Archaeol., 3:117-144, 1892).

[19] Putnam volume, as just cited; the Seri, in AA, 6:88, 1904.

[20] AA, 6:86-88, 1904. The nasal index means are given by Hrdlička. Neither means nor individual measurements are given for cephalic index, but the percentage distribution in index ranges of one point allows the calculation of an approximate mean.

SUMMARY AND CONCLUSIONS

121 114 Knowledge of the Seri is still in its infancy. McGee's actual observations are excellent but slender in range. He has interwoven them with conjectures, some of which are erroneous and others unproved and doubtful. Intensive study of the Seri will be difficult, chiefly for physical and practical reasons, but, to judge from such explicit data as are in hand, should prove them to be a tribe unusually interesting indeed, yet fundamentally similar to others in the same region. So many of their known traits are shared with one or another of these tribes, that it is practically precluded that complete investigation will leave the Seri as a unique people or even as one set widely apart, except in their historical fortunes.

13 182 The most distinctive thing about the Seri is their environment. This is extremely arid and lacking in water supply, but not desert in the ordinary, untechnical sense. Botanists describe it as a succulent vegetation desert. It is fairly well stocked with food inland and rich in food along shore. This territory is able to support a fair sized population, but scatters it and keeps it from settling down. The land is also inhospitable and difficult to strangers who are not ready to adopt the Seri mode of life. This fact has helped preserve Seri ethnic integrity and culture to an unusual degree. A considerable fraction of original Serian territory is wholly unoccupied by civilization today, a full three centuries after its frontier was settled. The Indian neighbors of the Seri, all being farmers in fertile valleys, had no more incentive or ability than Caucasians to penetrate Seri territory sustainedly.

171 174 Across the Gulf, the peninsula of California presents a very similar environment, and was inhabited by tribes of very similar subsistence and residential habits, culture level, and temperament. But the Baja Californians differed from the Seri in being so situated, with reference to the rest of the world, that the length of the peninsula cut them off, except in the northern portion, from nearly all outside relations. Each group in the peninsula thus had contacts and stimuli only from others of similar culture. The Seri, on the contrary, having long been surrounded on the landward side by peoples of higher cultural level, were able to exploit this difference, in part by adopting cultural traits from their neighbors; and perhaps still more largely by preying upon them economically; while their habitat afforded them a refuge from destructive reprisals. Such may have been the condition in pre-Columbian days. At any rate it has been such since the coming of the Spaniards, and has made the "history" of the Seri different from that of the Baja Californians.

174 Three islands, Tiburon, San Esteban, and San Lorenzo, form stepping stones from Seri mainland to the peninsula. The water gaps between them are navigable to native craft and have been navigated

648 726 [161] The Encinas war reduced the tribe to some 350 people, and temporarily discouraged their bloodthirsty raids. By 1893, however, new killings were being reported. In one instance the Seri Chief, Juan Tomas (Fig. 14), watched as the men of a large rancho left for a rodeo and then, worming up through the brush, led his warriors into the buildings and with clubs and arrows massacred every woman and child within. Two Yaqui women who had managed to escape into the brush watched as the warriors seized the infants by their feet and dashed their [727] brains out against a large rock near the corral.

In 1904 a number of wilder Seri, led by several Yaquis, went on the warpath and killed every soul in a Papago village. The war with the Papagos that ensued aroused the Governor of Sonora into action. Nearly 250 armed men were sent out to kill or capture the Yaqui leaders and to administer a severe lesson to the Seris. The desert water holes were all placed under guard until the Seri chief, Juan Tomas, was forced to surrender for his thirsting tribesmen. Peace was conditional on the delivery of the Yaqui leaders with their hands tied together. Two days later a couple of gaunt, wild-looking Seri women, clothed in rags and with painted faces, walked into the camp to keep the conditions of the peace as they had understood them. They carried a palanca between them from which were suspended bundles of severed hands of the Yaquis who had been clubbed to death as they slept.

● 114 648 Twenty years after the delivery of the Yaqui hands (1922) the senior author, under arrangement with the Museum of the American Indian in New York, carried out his first expedition into the heart of Seriland. Although still intolerant of aliens and at times dangerous if aggravated, their depredations had been reduced to the occasional killing of a stray cow. The Seris had come to live a comparatively peaceful life under the supervision of Roberto Thomson of Hermosillo. It was through his efforts that the Seris were saved from complete extermination by the vaqueros of Sonora, and after having treated them for many years as a friend and adviser, he had made it feasible for a visitor to enter

[p.263(A)]

114 their midst and to live among them without
undue fear of losing his life. Through the
648 kindness of Señor Thomson the senior author
succeeded in making himself a friend of the
[123] Seri and, enlarging upon this friendship
through long periods of living and traveling
among them, has acquired an intimate knowledge of these strange people.

In 1922 the fishing industry of the Gulf of
105 California was not yet well developed, and it
178 was to be ten years before the village of Kino
should appear on the maps of the Sonora
coast. The Seris were still isolated in their
desert domain and their numbers, then about
[161] 250, were maintaining themselves out of
reach of the infectious diseases of the white
man. The clan life had disappeared, and the
people lived as a single tribe with their old
chief, Juan Tomas, 90 years old at that time

[291]
[481]
[482]
[415]

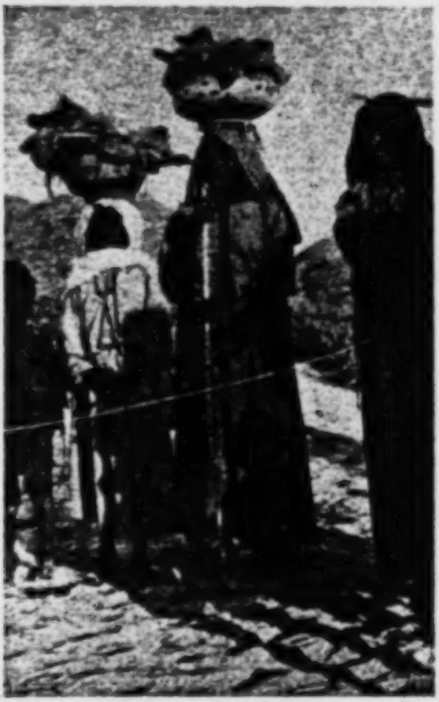

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

[p.263(B)]

178 of sea lion oil and powdered cactus skeleton, was launched. It was the largest craft they 396 had ever possessed and came to be called the "battleship," for its size.

After having established firm friendship ● 114 with the tribe in 1922, it was possible two years later to carry out an extensive plan to 221 learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not accumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water vessels [415] (the handmade olla was seldom any longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abun- 231 dant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]

[text continues on p. 265(N)]

171 the latter are largely unconcerned with by far the greater majority of them.
If there is any magical importance attached to any of the species, it has not
825 been discovered in the course of this field work and this fact has been corroborated by other recent observers.3

Summary

182 Extensive field work of this sort has many ramifications. One of the main
items investigated has been the acuteness of the native observation of animals.
825 In the case of the Seris, this knowledge progressively increases both in volume and in accuracy with the increasing economic importance of the group. The mammals and large fish are the best known followed in order by birds, reptiles, smaller fish, insects and marine invertebrates. It is also obvious that local ecology, habits and anatomy of the various species of animals set definite limitations upon observation. Lack of understanding of the hibernation of reptiles through the winter is a case in point. Another example is in the Seris' inability to distinguish between the sexes of birds. Purely cultural factors are also potent as can be seen in the standardized responses to the questions about the age of animals and the development of birds. Seri knowledge of animals is remarkably free from mythology, although a number of animals are known to have had mythological significance in the past.

825 There is little fear of animals except of those which are actually dangerous.

An interesting fact emerges from the comparison of the particular aspects of the knowledge of natural history. Namely, that this knowledge is not always symmetrical in that some facets of natural history are far better known by the Seris than others. An excellent illustration is provided here in the complicated ways of sexing animals, in their extensive knowledge of the food habits of some of the animals and their ecological environment, and by their very limited ability to guess correctly the age of animals.

Not all of these differences can be accounted for in natural terms and it is suggested that the answer to this asymmetry lies, perhaps, in the cultural factors unaccounted for in this study. In spite of their dependence upon a relatively few economically important species of animals, the Seris do make use of much of their animal environment in their diet, as would be expected of a marginal people who still live today in a fishing and gathering economy.

FOOTNOTES

~~[illegible]~~ 114 1. This field work was made possible by research grants from the Department of Anthropology, University of Washington. Most of the work was done in Desemboque, Sonora, during the summer of 1953 with some additional work there in May 1955.

For much help in carrying out this field work I am indebted to my friend, Leo Sandoval, a school teacher in Desemboque.

[89]

Seri Social Structure (1)

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121
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1. The material presented here was collected on a three-week visit to the Seri zone, the costs of which were defrayed by the I.N.A.H. [Instituto Nacional de Antropología e Historia], for the purpose of planning later investigations. It took place in January, 1952, in the company of Mr. Paul Finninger of M.C.M. [Mexico City College].

121 The permanent system of interacting influences that is presented among the Seri is of great scientific interest for its extreme characteristics of geographic isolation, environmental hostility, poverty, and the small size of the community.

131 The Seri occupy coastal territory in Sonora on the Gulf of California; formerly they covered a territory that toward the end of the 18th century, along the coast extended from Guaymas Bay, including it, to Punta Peñasco and, on the mainland, included the area in the vicinity of the present city of Hermosillo. They have been reduced little by little, now occupying only some isolated points on Cape Tepoca, Desemboque, and Tiburón Island, places from which, in spite of their inclemency, they are also being displaced.

648 Until some 30 years ago, most of the contacts of the Seri with Western culture had been warlike, ferociously defending their skins from the attacks of the yori (Mexican) invaders. Their contacts with the natives have been with the Yaqui, Papago, and those of Santa Rosalía (crossing the gulf). It was not until about 20 years ago, when the establishment of fishing camps was initiated with mestizo capital, that a new orientation in the treatment of the Seri came into being. Existing side by side with them at present are various Mexicans who exploit the products of Seri fishing, and some scientific investigators, principally from the United States.

13 They form enclaves in the heart of Aridamerica, with its cactus, shrubs and grasses, without flowing water, and with abundant flying and, especially, marine fauna.

Indian Improvement Brigades

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During this period 12 Indian Improvement Brigades were in operation. These brigades concentrated economic and social efforts in order to improve the environment and the conditions of agriculture and animal husbandry of their respective zones of influence.

The 26 legal offices, whose purpose is the promotion, consultation, and defense of the economic and legal interests of the aboriginal groups, are functioning effectively.

In collaboration with the government of the state of Veracruz, an experimental Educational Unit was established in the zone of Chicontepec (Ixhuatlán, a congregation of Colatlán). This Unit consisted of an Indian Training Center, the rural schools of the zone, two Indian Improvement Brigades, two legal offices and a delegation which, in cooperation with the Departments of Health and Agriculture, the National Cofee Commission and the National Corn Commission, attacked the problems of the region.

The goal sought is one of multiple social benefits which will be attained through the collaboration of the Indian pupil.

The administrative personnel of the Office was improved by the establishment of posts with equal opportunities for promotion and salary increases. The domestic help were substantially benefited by salary increases of 50%.

Budget Increase

Considering the recognized importance of the Indian class, the budget has been increased by 4 million 675 thousand 671 pesos from 1953 to 1957. In 1953 the budget was 4 million 667 thousand 820 pesos, while in 1957 it is 9 million 340 thousand 495 pesos.

In regard to 1956, the increase was 698 thousand pesos, since the total budget for this year was 6 million 642 thousand 555 pesos. In addition, the sum of 566 thousand 100 pesos has been assigned as a fund for Indian promotion.

In the future we hope to be able to continue working on an increasingly broader basis in collaboration with the other Indianist organisms, both national and international, which operate within the country.

THE SITUATION OF THE SERI INDIANS OF SONORA

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Following is data, taken from a report by Prof. Alejandro D. Marroquín, on the Seri population and some of its principal problems. The data gathered by Prof. Marroquín, synthesized here, first appeared in *Acción Indigenista*, Nº 36, the information bulletin of the National Indian Institute.

McGee (1898:214)

262 estimated that maritime resources provided two-thirds of the Seri
diet. Kroeber (1931: 20), approximately 30 years later, estimated
the proportion at about three-fifths. In the winter of 1960, 30 years
after Kroeber's visit, the Seri were obtaining at least three-fifths of
their food from the sea.

226 In pursuit of their main source of subsistence, the Seri travel up
[221] and down the narrow coastal band. In the winter of 1960 they were
[361] occupying one temporary camp toward the southern end of the band
and a permanent camp at the northern extreme. Seri women and
[462] children gather mollusks; fishing is a male occupation. In addition
[857] to gathering and fishing for their own needs, the Seri dispose of a
226 portion of their catch on the commercial market. This enterprise
439 began about 1930, and was encouraged by the establishment, in 1958,
474 of the Sociedad Cooperative de Produccion Pesquera Seri with the
cooperation of the Mexican government.

The Pacific green turtle constitutes the largest single item in the
225 Seri diet for at least six months of the year—from January to June—
262 and it is also caught occasionally at other seasons. In 1896 McGee
estimated that it provided 25 per cent of the total food supply.
Emphasizing the intimate ecological relationship between the Seri
and the turtle, McGee (1898: 186-187) wrote:

> . . . perhaps half of the aggregate life of the tribe is spent within easy reach of its [the turtle's] feeding and breeding grounds, and tribesman and turtle have entered into an inimical communality something like that of the Siouan Indian and buffalo in olden time. . . .

¶[114] Kroeber (1931: 20) believed that McGee stressed the Seri-turtle relationship too strongly and overestimated its contribution to the diet.
237 McGee (1898: 187), in support of the importance of the turtle to the
Seri, points to the fact that the turtle carapace is used for, among
other things, a house covering and buckler, a cradle, a coffin, and footgear.
The carapace is currently used for supporting and roofing
262 houses and as a starvation food. The contribution of the turtle to
the diet varies from year to year, but observations made in 1960
suggest a range of from 15 to 20 per cent as a reasonable estimate.

Seri men fish for turtle from boats, which are manned by two or
225 three men and are propelled by oars, sails, outboard engines, or any
[501] combination of the three. The boats operate either individually or
in groups. The men fish by night or day, depending on the weather
and sea conditions. When they fish at night, they use a kerosene
[416] lamp to attract turtles to the surface. The principal implement is the
harpoon.

The harpoon tackle of the Seri is illustrated in Figure 1. It con-
411 sists of a foreshaft (c-h), a mainshaft (j-k), and an extension cord
(i). The component parts of the foreshaft are a projectile point (c),
a gasket (d), a wrapping cord (f), a hafting base (g), and a lead cord
(e and h). In preparation for turtle fishing, the hafting base (g) is
plugged into the socket (j) on the main shaft (k), and the extension
cord (i) is looped through the lead cord (h).

121 tive behaviour, migrations, predation, distribu-
tion and the like. Existing ethnographic sources
on the Seri barely touched on these matters and
●114 such information as is available concerns only
121 a few economically important species and even
then concern only the economy and fragments of myths in which animals are involved. This is not surprising. To my knowledge, there is not a single publication in existence dealing with the aboriginal knowledge of natural history as such, certainly not in the North American literature. Much less, yet such an approach had been followed in the standard ethnographies under the heading of "ethnozoology." It has been left to the ethnobotanists (Whiting on the Hopi, Chamberlin on the Gosiute, Robbins *et al.* on the Tewa are the best examples) to attempt something along these lines, but even this is on a limited scale.

121 Since the material for the present study has been obtained with this in mind, it inevitably suffers from the limitations imposed by the outline of the problem. The Seri material has been gathered as one of the series of studies undertaken among the selected Indian tribes (Sumu, Cora and Karajá are others) in order to have comparative material from cultures different in their basic economy and occupying different ecological niches. Thus, an analysis of the Seri material alone further limits the application of it and the conclusion one may draw from it.

The main intent then is to form an orderly and analytical presentation of the material which later may serve for comparison with the analogous material gathered among other tribes.

What then can be done with this type of material and what is the purpose of such work? For this, several different answers can be offered. To begin with, the factual data on the aboriginal knowledge of natural history of animals is sadly neglected. What there is, is fragmentary. Ethnobotanies outnumber ethnozoologies in the North American literature by better than six to one. Thus the present work and also other work I have done along these lines will fill in a gap in our knowledge.

Secondly and more importantly, this work, I believe, suggests a very novel approach toward ethnozoology, the sort of approach so far untried. This sort of systematization of the zoological knowledge among the primitives, makes a comparative approach possible, much as we have comparative studies, for example, of the social organization or of the political systems. In other ways such systematization also makes easier the internal analysis of the material.

Another important angle in this work is an attempt to relate aboriginal natural history knowledge to the general economy and to the natural environment. This is phrased as a question: how does the general economy of the people influence their knowledge of the natural history of animals? Specifically: what is the extent of their knowledge of various animal groups and how does this knowledge increase or decrease relative to their general economic preoccupations? Also: how does the general natural environment, climate espec-

[P. 3A]

121 documentary data and second, also the archaeological data. The subject matter unfortunately [172] is absent from the first. As for the archaeological data, there is none as yet to date for the area ●[114] except Giffor's unpublished manuscript. Nor have we the kind of ethnography that would be of help—not until ethnographers will pay greater attention to the naturalistic knowledge of the people. Nor can the matter of the Seris' cultural connections be undertaken with the present material with any degree of reliability, simply because no such material exists for the neighboring group.

However, few suggestions outside the limitations and the main object of the present analysis can be made. From the fragmentary data available I shall try to show the change in utilization of animals by the Seris. I think I can also indicate a few points in support or denial of this or that idea of the Seris' cultural connections. I can also suggest the direction of the attitudes toward animals in the Seri culture, in a sphere which normally we assign variously within the domain of religion or world view. I can also indicate some of the major changes in the Seris' exploitation of general environment. All these can be suggested only fragmentarily, as only small bricks toward a generalized structure of our knowledge of the Seri culture. To this extent the present analysis should be helpful to the future student of the Seri culture and to our general understanding of it.

Procedure

114 The field work on which this material is based has been done during the summer of 1953, June-September and again for one week in May, 1955. [164] [166] The second visit took place at a most inopportune time, amidst bad measles, dysentery and a flu epidemic which completely disorganized the tribe and persuaded most of them to flee Desemboque into the coastal desert.

The work was accomplished mostly in Desemboque, the Seris' largest and most permanent settlement after 1940 where most of them lived. Occasional side trips were undertaken later to Hermosillo, Estero Sargente, Campo Vivora, Tiburon and some of the other places mostly with the view of evaluating their ecological nature and for the observation and acquisition of the zoological materials not available in Desemboque. These trips had been undertaken in the company of the Seris who then also doubled up as informants.

124 [126] During the first two weeks of my stay in Desemboque, I did no interviewing but concentrated on the collections of zoological material, occasionally and informally asking for the name of this or that animal. After two weeks regular interviewing work was commenced, first with an aid of Mr. Leo Sandoval, Mexican, U.S.—educated school teacher, but later on entirely without an interpreter. There are sound reasons for this practice. Direct questioning allows the interrogator to evaluate the replies in their less obvious nuances, the reactions of the informant to the question, his hesitations, uncertainties and the like.

In the event of well-known animals with those colloquial Spanish name everybody, Mexican and

[P.4A]

II

OUTLINE OF SERI CULTURE

161 At the moment their number should have in-
164 creased again, after a disastrous epidemic in the
spring of 1955.

Biological Background

142 The Seris are somewhat atypical among the
peoples of the general area in that they represent
a very slender, sinewy, tall type. This is true of
both men and women. This physical type in gen-
eral is apt to be associated with the desert habitat
and the Seris answer the requirements very
well. As shall be seen, their economy also repre-
433 sents characteristic adaptation to the desert con-
ditions of pre-agricultural people.

Economy

The Seris readily fell into the category of the pre-agricultural hunters and gatherers with one variant, dependence on the produce of the sea, whether marine turtles, fish or littoral invertebrates.

[241] Here the Seri provide another exception for
the region. They are the only group that never
had any agriculture. McGee has pointed out their
lack of agricultural sense and this has also been
mentioned by Kroeber and by incidental Mexican
visitors. Of late years, some efforts have been
made by the Mexican government and the Ameri-
can Friends' Service Committee to persuade them
[648] toward agriculture, but to no avail. The Seris
occasionally hire out to the surrounding Mexican
[464] or American rancher-farmers but grow restless
after a few days of cotton picking and retire, with
their advanced pay lost to the employer. On the
other hand, efforts to teach them related practices,
well digging for example, also failed to interest
them. To this day they remain much in the orig-
inal pattern of economy.

262 McGee (1898:214) who had a chance to observe
●114 them from the first hand and who also had access
to valuable information from the outsiders gives
the following figures for their diet:

land game, large and small (incl. stolen stock)	21%
waterfowl and eggs, incl. pelican	13
sea-turtles	25
fish	15
shellfish	10
cactus fruit	9
other plants	6
miscellaneous	2
total animal 84%	marine 65%

Kroeber (1930:20) questions these figures and thinks that shellfish represents greater percentage than McGee indicated. He also thinks the use of turtles had been exaggerated. He figures the dependence on the animal diet as 75% and on marine 60% but he suspects that these figures are too high for a band with ready access to countless cacti and mesquite.

[P.68]

226 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes 411 with disastrous results to themselves, mostly as 177 a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. [225] The harpoon is now exclusively a weapon for the turtle hunt.

226 177 An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. [157] I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy ● [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

[P.7 B]

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold also but now it isn't used at all." This conflicts
● [114] with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either then or earlier. But today the Seris do not eat the
[262] flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars and the jaguars but cites no evidence for it. Yet
[411] in his time Seris' almost only weapons were the bow and arrow and a lance which today has
[177] been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had no way of checking whether this was the animal
[124] the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
*[825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

*825 In 1956 I published data concerning economic exploitation of the reptiles by the Seris which
● 114 need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
[262] field work because some of the informants are disinclined to admit eating certain animals or will simply say, "these had been eaten in the past but
[124] not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[178] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.[*] Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
[177] the fish (with the introduction of hook and line fishing). But anther factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
[225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

---

[*] Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P.22 B]

MOLLUSCA

VII

301
* 825
262
439
[226]

USES

Species	Food Pres.	Food Past	Decoration Pres.	Decoration Past	Trade Pres.	Trade Past	Bait
Octopus bimaculatus	x	x				x	x
Codakia distinguaenda		x					
Lavicardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cyparea annettae				x[2]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella bradeifiana		x[3]			x	?	
Polinices recluziana	x	x					
Chlamys subnudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radians			x				
Ficus ventricosus	x						
Nioche bistriunoca	x	x					

[415]
[436]

[1] Occasionally used as dip spoon

[2] Supposedly used in the past for money

[3] In the past "giants of 300-400 maybe years ago have eaten it."

[4] Only pearls

* 825
114

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

262

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

[178]

262
172

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana, Chlamys subdudosa, Volsella capax,* and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

[P 38 B]

XI

SUMMARY

*825 [114] In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Mollusca	37	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine
262 species of mammals reported as eaten only six still figure out in the diet. The reduction is even more
177 striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

262 Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs de-
[439] creased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns
[177] of exploitation of animals has been a result largely of an outside stimulus.

Fishing and Hunting

226 185 Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

[P. 54 A]

X

INSECTS AND ARACHNOIDS

●114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 McGee says that "good many insects" are part
of the Seri diet, although he does not specify just
[114] which they were nor how significant. There is no
doubt that in his days, the insects played some role
in the Seris' food and that they were probably
far more important in the distant past, in the
[177] XVIII and early XIX centuries, before large
flocks of livestock, horses and cattle of the Spanish
rancheros offered excellent opportunities to supplement the usual diet.

Of all this but minor traces remain today. The
Seris even have forgotten which insects had been
eaten by their ancestors. Apart from the bees,
only the Sphingid caterpillar has been indicated as
"eaten in the past, but not now." As for the bees,
[263] their honey still is part of the Seri diet. But with
the availability of sugar, even this addiction
dwindles.

* 825 Other than this I have been unable to discover
any uses whatever, except perhaps as playthings
857 of little boys, with the usual torture in view. The
Cicada is most significant of these, of which more
later.

Pets

The only insect pet is a *Cicada*. This insect is
231 usually tied to a long thread, its forewings partly
clipped off and then released into the air like a
[171] kite. Local Mexicans also provide their own boys
with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatodera*, *Photopis*, *Scolopaella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduriid*—all these were in the

[P·47 B]

*825 or toxic contrary to their genuine nature. When such contrasts exist, the beliefs cannot always be explained as a matter of the influence from the Mexican folklore. The reasons for this I discussed in the chapter on the reptiles and amphibians. The explanation for such beliefs depends mostly on additional field work. It is also interesting that in some of these instances (bat for example) there is a suggestion that the belief in the toxicity or other unpleasant traits not only is not associated with the Mexican folklore but is basically aboriginal, and it is on the way out among the younger men. [178]

Attitudes

* 825 182 With rare exceptions Seri attitudes toward animals are remarkably sober, pragmatic and matter of fact. This is evident in how little folklore or irrational fear is connected with the animals. It all runs pretty much along the line of their generalized attitudes, world view and religion as suggested by other investigators (Kroeber 1930:4; This is also the opinion of Spicer, personal communication). Elements of mystery are almost completely absent and this is probably not entirely due to the disintegration of their religion and culture as Kroeber (*Ibid*) thinks. ● [114]

* 825 171 In other ways, their attitude toward animals ranges from indifference (adults) to downright deliberate cruelty (little boys). In this, the Seri boys differ markedly from the boys of some of the other groups I studied (Malkin 1958:89).

[P. 57 A]

Section V

The Seri Indian

Unfinished Book Manuscript

War Chief of the Seris

The Pelican Skin Robe

175 131 *Three centuries ago they were a friendly people living along the banks of the Sonora River from Hermosillo to where the flow of water sinks into the marshy banks along the coast of the Gulf of California.*

175 797 *The great Padre of the Pimas, Eusebio Francisco Kino, first visited the Seris in 1685, and found them ''a very gentle people.'' After a short preachment to them he noted that ''With very great insistency they begged me to remain with them and baptize them saying they would give me horses, fish and many products of the country, and that they would build me a house and a church. On three different days I said Mass in their country.''*

The Padre could not remain but two years later (1687), he sent Father Adam Lily to them. Lily established a mission---Santa Maria del Popula---on the banks of the River near what is now Hermosillo. The Seris remained faithful to the Padres when the whole country rose in revolt some years later.

175 [131] *The withering hand of time worked against them, however. They were pushed farther and farther down onto the barren lands along the gulf coast until, finally, in a fierce and desperate retreat out into the sea and onto the desert Island of Tiburon. The swift and deadly channel between the Island and the Sonoran mainland gave them protection. They retrogressed through the centuries into a fierce and, perhaps, cannibalistic tribe.*

• 114 [123] *As late as 1922, when Edward Davis first visited Tiburon Island, a man was putting his life on the line when he stepped on the Island. But perhaps the quality of the man had something to do with it. As did Father Kino, Edward Davis was able to make friends of them.*

The following manuscript is an incompleted book on the Seris which was found among his papers.

[pp. 6-138 not processed]

10:Davis E-5 (1922-ca.1939) 1965 NU31 Seri NU31

Unfinished Book Manuscript

114 At the Museum of the American Indian, Heye Foundation in New York City where I was staying temporarily ____________, I was asked by Mr. Heye where I would like to go on my next collecting trip for the Museum. I had already covered the whole of southern half of Arizona and had made thorough collections from Pima, Papago, Maricopa, Apache, Hualapai and other tribes, and had also covered Southern California and its deserts.

For many years I had read every scrap of information about the treacherous Seri Indians of the Island of Tiburon---off Mexico, and was greatly intrigued with these wild primitive natives. My theory has always been that the farther away from civilization a tribe is located, the better chance to secure original or aboriginal material, so I asked Mr. Heye if he had anything from the Seri Indians of Tiburon Island, and he said: ''Not a thing, nor any other museum.''

''Well, I think I'll go to Tiburon in March,'' I said.

He said, ''I wouldn't advise it. You know their reputation. No white man landing on that mysterious Island has ever returned. They are the most treacherous Indians in North America, and Tiburon Island is a good place to stay away from.''

114 123 [115] Nevertheless, I went to Hermosillo, capital of the State of Sonora, Mexico, and there I met and engaged Roberto Thomson, whose father had treated with kindness some of the Seris who had reached his ranch, and he, Roberto, thought we could land on the Island and, by considerate treatment, make friends with these wild *Tiburones*. It seemed as if we were flying into the face of certain death from their reputation, but we met these people, and by gifts and fair treatment, we became good friends, and from that time in 1922 to the present, that friendship has endured unbroken.

I have the absolute freedom of the Island, and have visited there at least six times. I have been through the Island on all its coasts and am familiar with its wild inhabitants.

175 Indians. Dr. McGee, confirming Bill Fain's story of the disappearance
648 of Robinson and Logan, the San Francisco newspapermen, secured the
facts from a Seri who spoke Spanish, as follows:
266

> On reaching the Island, Robinson and Logan asked the natives if there were any deer to be shot and receiving an affirmative reply, they started for the interior toward the mountain with several Seris as escort, leaving the two other men with the boats. On the face of it, this was a most foolhardy performance and Robinson actually loaned his rifle to one of the Seris, who accompanied him. The Seri shot Logan in the back and wounded Robinson who called for help. In trying to escape he stumbled and fell and the Indians beat his brains out with rocks.

On the Gulf Coast, this list of killed and of course eaten, could be greatly enlarged and leads to the fact that, up to recent years, no stranger---American, Mexican or Indian---could land on Tiburon and live. Ever since Sonora was settled, two or three hundred years ago, the Island has borne a sinister reputation and up to recent years, it has lived up to its reputation. Even now, no one is allowed to land on the Island without permission of the Governor or the Superintendent.

[181] The Island of Tiburon is isolated, its approaches guarded by deserts and sea, and its people the wildest and most primitive race in North America---every man's hand against them, and they against every body.

175 Dr. McGee's investigations in 1895 failed to convict the Seris of
cannibalism or of eating any part of either whites or Indians, killed
648 on the Island or killed in battle. This reputation of cannibalism is
266 prevalent in Mexico as well as in the United States, but the charge
114 has never been proven.

It is true, they eat the flesh of animals raw as well as partially cooked, and that may have given rise to this gruesome reputation, but my own investigations covering several visits on the Island and on the Sonoran coast, failed to convince me that they had eaten human flesh. They told me themselves they had not, and if all reports of cannibalism by the Seris were traced back to their source, they would end in surmise or guesswork. No one, so far as I have been able to find, has actually seen a Seri eat human flesh. Until such a witness, can be produced, the Seri remains unconvicted.

Let us examine the so-called evidence of the mining men, as quoted by Bill Fain: the finding of a white man's hands spiked to a cross, and the schoolmaster's papers scattered on the Gulf Coast of Sonora. This evidence is too circumstantial. The discs of leather even fitted the holes in the bag.

In the first place, nails are scarce in Sonora, and no Seri at that time would risk his life to procure nails or spikes at any ranch. Nearly all woods in that region are hard and would almost certainly turn a nail. The Seris had no axes to chop trees to make crosses, and

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

[412] There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

[illegible] The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1936*

115 On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

136
115

Sme Thomson, Pancho Oligeria and Roberto Thomson at Tecomate, on north coast, upending whale ribs cast up on the beach. Although thoroughly dried and bleached for years by a semitropic sun, it took their united efforts to elevate these ribs.---E.H.D.

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Roberto Thomson, Santo Blanco and Edward H. Davis

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Edward H. Davis with a rattlesnake around his neck - 1922

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Santo Blanco and Edward H. Davis - this hombre gambled away his only wife - Sonora - 1929

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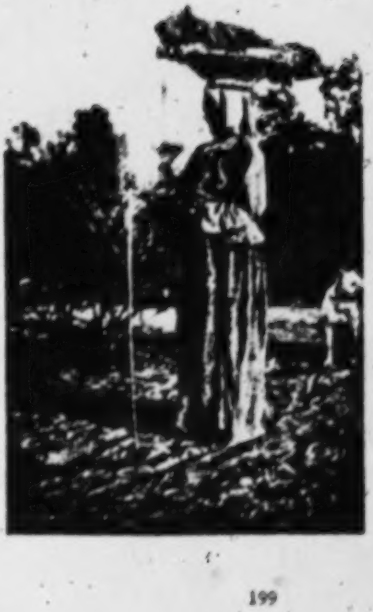
Seri method of carrying infant



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Edward H. Davis and Pelican skin robe made for him by Seri Indians - 1934

SERI BANDS

EDWARD MOSER

•114 Mr. Moser, of the Summer Institute of Linguistics, holds a Master's degree in Linguistics from the University of Pennsylvania. He has been doing research on the Seri language during trips to Sonora since 1952.

ABSTRACT

105 In previous publications on the Seri, frequent reference to distinct
621 Seri groups points to historical tribal divisions at some level.
642 Recent research among the Seri has determined the former existence of six bands which included three dialect groups. Three of
614 the bands were subdivided into clans. These six bands, whose formation may have been caused largely by internal struggles,
[178] were eventually crushed and reduced to a single group by the devastation brought about by external conflict.

INTRODUCTION

101 The Seri tribe is located in Mexico along the coast of Sonora
131 between Bahia Kino and Puerto Libertad, and on Tiburon Island
[161] (Fig. 1). Today it consists of approximately two hundred and eighty persons who call themselves *kongkaak*[1] "the people." Al-
178 though at one time it was comprised of six distinct bands (Fig. 2),
621 the tribe has now lost its band organization. However, much of
642 the late history of these now-defunct tribal units remains vivid in the minds of the Seri. The purpose of this paper is to present
121 some of the salient features of these former bands, to discuss
621 certain interrelations between them, and to recount the Seri ver-
642 sion of the disintegration of the band system.[2]

114 Three published studies on the Seri should be mentioned.[3] Of these, the reports by Kroeber and by Griffen are the more reliable. All three investigators mention tribal divisions which Griffen rightly designates as bands.

BANDS

642 BAND I *xika ʔai kkoii* "they who live toward the true wind"

101
131 This group is commonly referred to in the literature as the Tepoca or Salinero. As shown on Fig. 1, they inhabited an area which extended from a point slightly north of Puerto Lobos to Punta Tepopa on the south. The territory extended inland, encompassing the general area delimited by the San Ignacio River.

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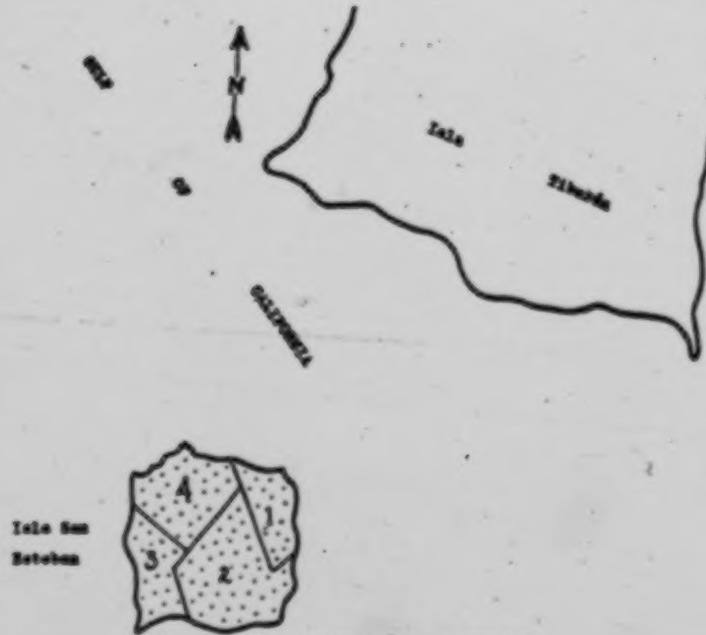

FIG. 5. Subdivisions of Band VI

BAND SOCIAL STRUCTURE

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The social structure of the bands can be properly understood only in relation to the social structure of their smaller units, the *iʔiziitang*. The kin group which resided in and dominated each such subdivision constituted a clan.[5] This group conforms to Murdock's three major specifications for clan designation.[6]

Murdock's first specification states that a kin group, to constitute a clan, must be based explicitly on a unilinear rule of descent. The kin group of each Seri band subdivision was based on patrilineal descent. An individual was closely associated with the group of kinsmen of his subdivision, all of whom were related to him through males only. The father was the head of his household. For example, he assumed leadership in marriage negotiations. Upon his death, the eldest son took his place. [611] [592]

The second specification states that such a kin group must have residential unity. Seri marriages were exogamous with respect to the subdivision,[7] and the rule of residence was patrilocal. The domicile was set up near the home of the groom's parents. [582] [591]

642
621 The third specification states that a kin group, to constitute
618 a clan, must exhibit actual social integration. Murdock stresses
714 the necessity of observing a positive group sentiment, such as
[186] would be manifested by organized collective activities or group
[476] functions, before the group can be characterized as a clan. An
essential feature of this group sentiment is the inclusion of the wife as an integral member of her husband's kin group.

621 This sort of social integration was indeed exhibited by the
618 Seri kin group of each subdivision. It was, in fact, fostered by
the isolation brought about by the inhabitants' reservation of
[628] hunting and fishing rights for themselves. Tension existed between
[622] certain subdivisions and, since there was no chief, the oldest
[701] capable male organized and led the fighting force of the clan. In
times of need, the members of the group united to give mutual
[583] assistance. The groom-to-be could expect material aid from his
[476] fellow clan members in the payment of the bride price. Mutual
assistance was given in the fulfillment of puberty ceremony and burial obligations. The men cooperated in their hunting and fishing expeditions. The women of the clan, including the in-married spouses, cooperated in the gathering and sharing of food. Everyone could attend the various fiestas. It is said that in the performance of these collective activities, close harmony generally prevailed.

BAND INTERNAL AND EXTERNAL RELATIONS

642
619 The division of the Seri tribe into bands was likely brought
578 about through internal strife. During the period of band history
[648] known to the present-day Seri,[8] however, serious skirmishes seem
to have been fought predominantly with non-Seri groups.[9]

Band I

642 Band I internal relations appear to have been relatively
621 peaceful. The inhabitants of subdivisions 1, 2, 3, 4, and 5 were
628 fishermen as well as hunters and gatherers, whereas the people
578 of subdivision 6 preferred to subsist on gathered food and wild
[721] game. Also, the members of Band I robbed cattle and horses,
[648] which pursuit brought reprisals from the Mexican ranchers. There
was apparently considerable social intercourse among the six subdivisions, even to the extent that hunting rights of one were sometimes granted to inhabitants of a neighboring section.

Trouble developed when some members of Band I speared fish within the domain of Band V. Here also bitter fighting broke out, and any semblance of peaceful co-existence between the two groups was destroyed.

so named must be of the same sex as the first. The significance of land ownership needs further investigation. 000

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own *i?iziiting*, where he can die and be buried in the area of his choice. 361 642 621 763

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: p is voiceless labial stop; t is vl. dental stop; *k* is vl. velar stop; ? is glottal stop; *f* is vl. labial flat spirant; *w* is vl. labial grooved-rounded spirant; *s* is vl. alveolar spirant; *z* is vl. alveo-palatal spirant; *l* is vl. lateral spirant; *h* is vl. velar spirant; *x* is vl. back velar spirant; *m* is labial nasal; *n* is dental nasal; *ng* is velar nasal; *y* is palatal semivowel; *i* is a high close front vowel; *e* is a low close front vowel; *a* is a low open central vowel; o is a mid close back vowel. 128 104

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions. 114 115 122 124

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959. 113 642

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain. 621 128

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed." 618 114 174

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation. [642]

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949. 113

7. Marriages were usually contracted within the band. 000

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts. 173 178

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations. 648

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward. [721]

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups." 114 628 642 648

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face 386
painting is not the mineral dumortierite, as previously believed,
but is a prepared pigment. This paper is a description of the 114
process in which three elements are combined to produce this
pigment.

McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third
blue obtained from a plant on Tiburon (Xavier 1946). Present [824]
investigation has shown that as far as the Seri know, the only [177]
blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

The components and the method of manufacture of *?antezj* 386
kóil are said to have been taught to the women long ago by *?ant* [462]
i?akimxoj "they who tell the things about the earth." The actual [173]
color transformation is veiled in mystery to the Seri who say [881]
that if the process of making the clay is observed by any girl who [789]
has not passed the menarche, the blue will not appear. Its appear-
ance is not attributed to shaman power, however. [756]

?antezj kóil has been in less demand during the last few [177]
decades since commercial bluing has been readily available.
Nevertheless, *?antezj kóil* is the blue preferred by those women [178]
who continue to adorn their faces in the traditional manner. [302]

The three ingredients used in making the blue clay are the 386
root bark of *xkoktz (Franseria dumosa)*, *iki kóizj* "to grind with" 824
(a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan siiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

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*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

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NOTES

104 1. The phonetic values of the symbols used are the following: t is
386 voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial
grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal
● 114 spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar
spirant; m is labial nasal; n is dental nasal; i is a high close front vowel;
e is a low close front vowel; a is a low open central vowel; o is a mid close
back vowel.

386 2. The restriction as stated to me by various women pertains only to
784 young girls below the age of menarche. Actually, however, none of the
841 above-mentioned young men and women, most of them in their twenties,
was allowed to observe.

126 3. Plant specimens are deposited in the Herbarium of The University
of Arizona.

386 4. The blue "pencil" which McGee describes (McGee 1898: 166) and
pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the
114 ?antezj koil.

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